WILLOW CREEK MINE

C/007/0038

2008 ANNUAL REPORT

C/007/038 Incoming

#3300

K

PLATEAU MINING CORPORATION
P.O. Box 30
Helper, UT 84526

COPY

May 15, 2009

Mr. Daron Haddock
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: **2008 Annual Report, Plateau Mining Corporation, Willow Creek Mine – C/007/0038**

Dear Mr. Haddock

Plateau Mining Corporation is herewith submitting one copy of the Willow Creek Mine 2008 Annual Report for the Salt Lake City Office. One copy for the Price Field Office has been hand delivered to Mr. Steve Demczak.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager
(435) 650:2951
dware@foundationcoal.com

Enclosures

C/007/0038, 2009, Incoming
Refer to:
☐ Confidential
☒ Shelf
☐ Expandable
Date 05/15/09 For additional information

File in:
☐ Confidential
☒ Shelf
☐ Expandable
Refer to Record No 0002 Date 05152009
In C/007/0038, 2009, Incoming
For additional information

This Annual Report shows information the Division has for your mine. Please review the information to see if it is current. If the information needs to be updated please do so in this document. At the end of each section the operator is asked to verify if the information is correct. Please answer these questions and make all comments on this document. Submit the completed document and any additional information identified in the Appendicies to the Division by April 30, 2009. During a complete inspection an inspector will check and verify the information. To enter text, click in the cell and type your response. You can use the tab key to move from one field to the next. To enter an X in a box, click next to the box, right click, and select properties, then the checked circle, then hit enter, or hit the unchecked circle if the X is to be removed.

GENERAL INFORMATION

Permitte Name	Plateau Mining Corporation
Mine Name	**Willow Creek Mine**
Operator Name (If other then permittee)	
Permit Expiration Date	April 24, 2011
Permit Number	C/007/0038
Authorized Representative Title	Dennis Ware, Controller
Phone Number	(435) 650:2951
Fax Number	NA
E-mail Address	dware@foundationcoal.com
Mailing Address	Plateau Mining Corporation P.O. Box 30 Helper, Utah 84526-0030
Designated Representative	Dennis N. Ware
Resident Agent	C.T. Corporation
Resident Agent Mailing Address	50 West Broadway, Salt Lake City, UT 84101
Number of Binders Submitted	Two

IDENTIFICATION OF OTHER PERMITS

Identify other permits that are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expiration Date
MSHA Mine ID(s)	42-02113	Legal Identity	
MSHA Impoundment(s)			
NPDES/UPDES Permit(s)	UT0400112	UPDES	May 1, 2013 Inactivated 8/05/2008
PSD Permit(s) (Air)	DAQE-037-00	Approval Order	
Other			

Operator, please update any incorrect information.

CERTIFIED REPORTS

List the certified inspection reports as required by the rules and under the approved plan that must be periodically submitted to the Division. Specify whether the information is included as Appendix A to this report or currently on file with the Division.

Certified Reports:	Required Yes	Required No	Included or Included	DOGM file location Vol, Chapter, Page
Excess Spoil Piles	☐	X	☐	
Refuse Piles	X	☐	X	
Impoundments	X	☐	X	
Other				
	☐	☐	☐	
	☐	☐	☐	

Operator Comments:

Inspector:
Has the operator complied with this section? Yes ☐ No ☐
Inspector Comments:

COMMITMENTS AND CONDITIONS

The Permittee is responsible for ensuring annual technical commitments in the MRP and conditions accepted with the permit are completed throughout the year. The Division has identified these commitments below and has provided space for you to report what you have done during the past year for each commitment. If the particular section is blank, no commitment has been identified and no response is required for this report. If additional written response is required, it should be filed under Appendix B to this report.

Admin R645-301-100
Soils R645-301-200
Biology R645-301-300
Landuse, Cultural Resources, Air Quality R645-301- 400
Engineering R645-301-500

Geology R645-301-600
Hydrology R645-301-700
Bonding & Insurance R645-301-800
Other Commitments

*Reminder: If equipment has been abandoned during 2008, an amendment must be submitted that includes a map showing its location, a description of what was abandoned, whether there were any hazardous or toxic materials and any revision to the PHC as necessary.

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan, which must be periodically submitted to the Division. Specify whether the information is included as Appendix B to this report or currently on file with the Division.

Water Monitoring each Quarter which is on file with the Division
Year 4 Revegetation Monitoring

Operator Comments:

Inspector:
Has the operator complied with this section? Yes ☐ No ☐
Inspector Comments:

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Change in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is Requesting that each permittee review and update the legal, financial, compliance and related information in the plan as part of the annual report. Please provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other change as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include certified financial statements, audits or worksheets, which may be required to meet bonding requirements. Specify whether the information is currently on file with the Division or included as Appendix C to the report.

Legal / Financial Update	**Required** Yes	No	**Included** or Included	**DOGM File location** Vol, Chapter, Page
Department of Commerce, Annual Report Officers	**X**	☐	**X**	
Other				

	☐	☐	☐
	☐	☐	☐
	☐	☐	☐

MAPS

Copies of mine maps, current and up-to-date through at least December 31, 2008, are to be provided to the Division as Appendix D to this report in accordance with the requirements of R 645-301-525.240. The map copies shall be made in accordance with 30 CFR 75.1200 as required by MSHA. Mine maps are not considered confidential. (Please provide a CD.)

Confidential information is limited to:

R645-300-124.310. Information that pertains only to the analysis of the chemical and physical properties of the coal to be mined, except information on components of such coal which are potentially toxic in the environment.

R645-300-124.330. Information on the nature and location of archeological resources on public land and Indian land as required under the Archeological Resources Protection Act of 1979 (P. L. 96-95, 93 Stat. 721, 16 U.S.C. 470).

R645-301-322, Fish and Wildlife Information; R645-301-322.100, the scope and level of detail for such information will be determined by the Division in consultation with state and federal agencies with responsibilities for fish and wildlife and will be sufficient to design the protection and enhancement plan required under R645-301-333 and R645-301-322.230, other species or habitats identified through agency consultation as requiring special protection under state or federal law; R645-301-333.300, Include protective measures that will be used during the active mining phase of operation.

The Division will provide procedures, including notice and opportunity to be heard for persons both seeking and opposing disclosure.

Map Number(s)	Map Title/ Description		
Annual subsidence map			
Mine map			
Other maps		**Confidential** Yes	No
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Operator Comments:

Inspector:
Has the operator complied with this section? Yes ☐ No ☐
Inspector Comments:

OTHER INFORMATION

Please provide any comments of further information to be included as part of the Annual Report. Any other attachments are to be provided as Appendix E to this report. If information is submitted as a group rather then by individual mine, please identify each of the mine's data in the list below.

Additional attachment to this report? **Yes** X **No** ☐

OVERVIEW OF RECLAMATION, PERMITTING AND PHASED BOND RELEASE ACTIVITIES

Operator Comments:

Inspector:
Has the operator complied with this section? Yes ☐ No ☐
Inspector Comments:

APPENDIX A

Certified Reports

Excess Spoil Piles
Refuse Piles
Impoundments

As required under R645-301-514

CONTENTS

SCHOOLHOUSE CONYON REFUSE PILE

2008 QUARTERLY INSPECTIONS

INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the tab key to move from one field to the next. To select a check box, click in the box or type an x.

GENERAL INFORMATION

Report Date	11 Dec 2008
Permit Number	C/007/038
Company Name	Plateau Mining Corporation

EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION

Pile Name	Willow Creek Preparation Plant (Schoolhouse Canyon) Refuse Pile
Pile Number	1211-UT-09-02113-01
MSHA ID Number	42-02113

Inspection Date	5 Dec 2008
Inspected By	Richard B. White
Reason for Inspection	Quarterly

Attachment to Report? (such as refuse sample analysis) Yes ☐ No ☒

Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

The refuse pile was initially constructed over 30 years ago. To the best of my understanding, topsoil and organic material were removed prior to placement of coal refuse. The refuse pile has been reclaimed and as-built maps and calculations have been submitted.

2. Placement of underdrains and protective filter systems.

To the best of my knowledge, there are no underdrains or protective filters associated with the refuse pile.

3. Installation of final surface drainage systems

The refuse pile has been reclaimed, with pile slopes reduced to 2:1 or flatter. The channels constructed to drain the refuse pile have all been verified to handle the peak flow resulting from the 100-year 6-hour storm event. The refuse pile has been graded to prevent impoundment of water except where the surface has been gouged for erosion protection.

4. Placement and compaction of fill materials

The refuse pile has been reclaimed and no additional material will be added.

5. Final grading and revegetation of fill.

The final grading of the pile was achieved in the spring of 2004 with the final seeding also occuring in the spring of 2004. The coal refuse was covered with approximately 3 feet of soil, which was deep gouged for erosion protection prior to seeding. Vegetation appears to be growing well on all areas of the reclaimed surface.

6. Appearances of instability, structural weakness, and other hazardous conditions

No instability, structural weakness, or other hazardous conditions were apparent during the inspection. The area of rock fall noted during prior inspections as resting in a portion of the primary reclamation channel shows no signs of change (i.e., no erosion or signs of decreased channel capacity due to the presence of the rock fall). I have previously evaluated the hydraulic capacity of the channel, with the rock fall in place, and found the channel capacity to be adequate.

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatment of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

The refuse pile has been reclaimed with all work being completed by the spring of 2004. There has been no coal refuse added to the pile since that time and no changes are anticipated. The cliffs above the refuse pile will likely continue to produce boulders and rocks that fall onto the reclaimed refuse pile. This should not affect the stability of the pile and can be considered as a natural process.

CERTIFICATION STATEMENT

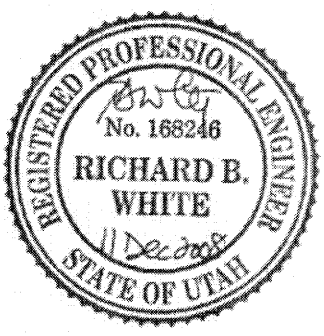
I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meet or exceed the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By Richard B. White, P.E.
Full Name and Title

Signature Richard B White Date 11 Dec 2008

P.E. Number and State 168246 (Utah)

[Cert. Stamp]



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To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the tab key to move from one field to the next. To select a check box, click in the box or type an x.

GENERAL INFORMATION

Report Date	28 Aug 2008
Permit Number	C/007/038
Company Name	Plateau Mining Corporation

EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION

Pile Name	Willow Creek Preparation Plant (Schoolhouse Canyon) Refuse Pile
Pile Number	1211-UT-09-02113-01
MSHA ID Number	42-02113

Inspection Date	13 Aug 2008
Inspected By	Richard B. White
Reason for Inspection	Quarterly

Attachment to Report? (such as refuse sample analysis) Yes ☐ No ☒

Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

The refuse pile was initially constructed over 30 years ago. To the best of my understanding, topsoil and organic material were removed prior to placement of coal refuse. The refuse pile has been reclaimed and as-built maps and calculations have been submitted.

2. Placement of underdrains and protective filter systems.

To the best of my knowledge, there are no underdrains or protective filters associated with the refuse pile.

3. Installation of final surface drainage systems

The refuse pile has been reclaimed, with pile slopes reduced to 2:1 or flatter. The channels constructed to drain the refuse pile have all been verified to handle the peak flow resulting from the 100-year 6-hour storm event. The refuse pile has been graded to prevent impoundment of water except where the surface has been gouged for erosion protection.

4. Placement and compaction of fill materials

The refuse pile has been reclaimed and no additional material will be added.

5. Final grading and revegetation of fill.

The final grading of the pile was achieved in the spring of 2004 with the final seeding also occuring in the spring of 2004. The coal refuse was covered with approximately 3 feet of soil, which was deep gouged for erosion protection prior to seeding. Vegetation appears to be growing well on all areas of the reclaimed surface.

6. Appearances of instability, structural weakness, and other hazardous conditions

No instability, structural weakness, or other hazardous conditions were apparent during the inspection. The area of rock fall noted during prior inspections as resting in a portion of the primary reclamation channel shows no signs of change (i.e., no erosion or signs of decreased channel capacity due to the presence of the rock fall). I have previously evaluated the hydraulic capacity of the channel, with the rock fall in place, and found the channel capacity to be adequate.

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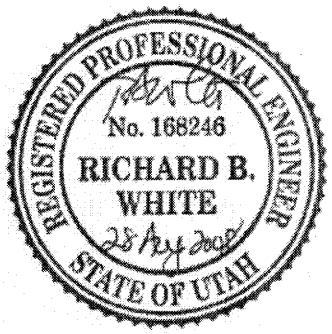
By Richard B. White, P.E.
Full Name and Title

Signature Richard B White Date 28 Aug 2008

P.E. Number and State 168246 (Utah)

[Cert. Stamp]



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*To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the **tab** key to move from one field to the next. To select a check box, click in the box or type an x.*

GENERAL INFORMATION

Report Date	26 Jun 2008
Permit Number	C/007/038
Company Name	Plateau Mining Corporation

EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION

Pile Name	Willow Creek Preparation Plant (Schoolhouse Canyon) Refuse Pile
Pile Number	1211-UT-09-02113-01
MSHA ID Number	42-02113

Inspection Date	18 Jun 2008
Inspected By	Richard B. White
Reason for Inspection	Quarterly

Attachment to Report? (such as refuse sample analysis) Yes ☐ No ☒

Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

The refuse pile was initially constructed over 30 years ago. To the best of my understanding, topsoil and organic material were removed prior to placement of coal refuse. The refuse pile has been reclaimed and as-built maps and calculations have been submitted.

2. Placement of underdrains and protective filter systems.

To the best of my knowledge, there are no underdrains or protective filters associated with the refuse pile.

3. Installation of final surface drainage systems

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4. Placement and compaction of fill materials

The refuse pile has been reclaimed and no additional material will be added.

5. Final grading and revegetation of fill.

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6. Appearances of instability, structural weakness, and other hazardous conditions

No instability, structural weakness, or other hazardous conditions were apparent during the inspection. The area of rock fall noted during prior inspections as resting in a portion of the primary reclamation channel shows no signs of change (i.e., no erosion or signs of decreased channel capacity due to the presence of the rock fall). I have previously evaluated the hydraulic capacity of the channel, with the rock fall in place, and found the channel capacity to be adequate.

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatment of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

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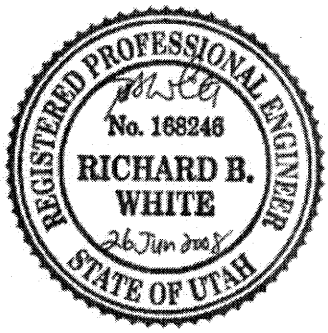
By Richard B. White, P.E.
Full Name and Title

Signature Richard B White Date 26 Jun 2008

P.E. Number and State 168246 (Utah)

[Cert. Stamp]



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INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the tab key to move from one field to the next. To select a check box, click in the box or type an x.

GENERAL INFORMATION

Report Date	31 Mar 2008
Permit Number	C/007/038
Company Name	Plateau Mining Corporation

EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION

Pile Name	Willow Creek Preparation Plant (Schoolhouse Canyon) Refuse Pile
Pile Number	1211-UT-09-02113-01
MSHA ID Number	42-02113

Inspection Date	26 Mar 2008
Inspected By	Richard B. White
Reason for Inspection	Quarterly

Attachment to Report? (such as refuse sample analysis) Yes ☐ No ☒

Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

The refuse pile was initially constructed over 30 years ago. To the best of my understanding, topsoil and organic material were removed prior to placement of coal refuse. The refuse pile has been reclaimed and as-built maps and calculations have been submitted.

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6. Appearances of instability, structural weakness, and other hazardous conditions

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7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatment of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

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CERTIFICATION STATEMENT

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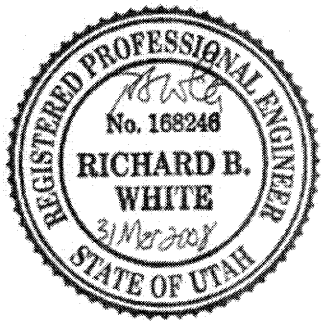
By Richard B. White, P.E.
Full Name and Title

Signature Richard B White Date 31 Mar 2008

P.E. Number and State 168246 (Utah)

[Cert. Stamp]



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IMPOUNDMENT 001

2008 QUARTERLY INSPECTIONS

To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the tab key to move from one field to the next. To select a check box, click in the box or type an x.

GENERAL INFORMATION

Report Date	11 Dec 2008
Permit Number	C/007/038
Mine Name	Willow Creek Mine
Company Name	Plateau Mining Corporation

IMPOUNDMENT IDENTIFICATION

Impoundment Name	Sedimentation Pond 001
Impoundment Number	001A
UPDES Permit Number	UTG040012
MSHA ID Number	NA

IMPOUNDMENT INSPECTION

Inspection Date	5 Dec 2008
Inspected by	Richard B. White
Reason for Inspection	Quarterly

(Annual, quarterly or other periodic inspections, critical installation , or completion of construction.)

1. **Describe any appearance of any instability, structural weakness, or any other hazardous condition.**

No instability, structural weakness, or other hazardous conditions noted during the inspection.

Questions a and b are required for an impoundment, which functions as a Sedimentation pond.

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Sediment storage capacity = 4.6 AF
Maximum sediment storage elevation = 6163.7 ft
60% cleanout elevation = 6161.5 ft
60% cleanout volume = 2.8 AF

No substantial amount of sediment has accumulated in the pond since it was last cleaned out.

b. Principle and emergency spillway elevations.

Principal spillway elevation = 6171.0 ft
Emergency spillway elevation = 6172.0 ft

2. **Field Information**

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

The pond was empty at the time of the inspection, with no water flowing into or out of the pond. It does not appear that the pond has discharged since the last inspection. The pond inlet and outlets appear to be in good working condition, with no signs of erosion or structural instability. The embankment appears to be structurally sound. The spillways were not operating at the time of the inspection, but appear to be in excellent condition. Because there has been no outflow, no water samples have been collected.

3. **Field Evaluation.**

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No substantial amount of sediment has accumulated in the pond. Since much of the mine area has been reclaimed, the pond has a far greater capacity than is necessary under the regulations. It is doubtful that the pond will spill under normal conditions.

QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Richard B. W. [signature] Date: 11 Dec 2008

CERTIFIED REPORT

IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	☒	☐
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?	☒	☐
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	☒	☐

COMMENTS/ OTHER INFORMATION

The pond appears to be in excellent condition. No repairs are necessary for its continued operation. It is recommended that the pond continue in use under current protocols.

CERTIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

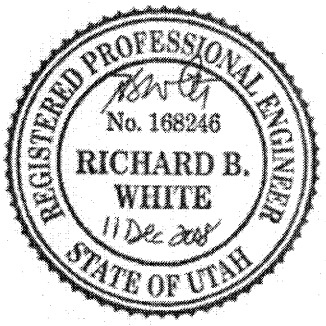
By: Richard B. White, P.E.

Full Name and Title

Signature: Richard B White Date 11 Dec 2008

P.E. Number & State 168246 (Utah)

[P.E. Cert. Stamp]



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GENERAL INFORMATION

Report Date	28 Aug 2008
Permit Number	C/007/038
Mine Name	Willow Creek Mine
Company Name	Plateau Mining Corporation

IMPOUNDMENT IDENTIFICATION

Impoundment Name	Sedimentation Pond 001
Impoundment Number	001A
UPDES Permit Number	UTG040012
MSHA ID Number	NA

IMPOUNDMENT INSPECTION

Inspection Date	13 Aug 2008
Inspected by	Richard B. White
Reason for Inspection	Quarterly

(Annual, quarterly or other periodic inspections, critical installation , or completion of construction.)

1. **Describe any appearance of any instability, structural weakness, or any other hazardous condition.**

No instability, structural weakness, or other hazardous conditions noted during the inspection.

Questions a and b are required for an impoundment, which functions as a Sedimentation pond.

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Sediment storage capacity = 4.6 AF
Maximum sediment storage elevation = 6163.7 ft
60% cleanout elevation = 6161.5 ft
60% cleanout volume = 2.8 AF

No substantial amount of sediment has accumulated in the pond since it was last cleaned out.

b. Principle and emergency spillway elevations.

Principal spillway elevation = 6171.0 ft
Emergency spillway elevation = 6172.0 ft

2. **Field Information**

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

The pond was empty at the time of the inspection, with no water flowing into or out of the pond. It does not appear that the pond has discharged since the last inspection. The pond inlet and outlets appear to be in good working condition, with no signs of erosion or structural instability. The embankment appears to be structurally sound. The spillways were not operating at the time of the inspection, but appear to be in excellent condition. Because there has been no outflow, no water samples have been collected.

3. **Field Evaluation.**

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No substantial amount of sediment has accumulated in the pond. Since much of the mine area has been reclaimed, the pond has a far greater capacity than is necessary under the regulations. It is doubtful that the pond will spill under normal conditions.

QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Richard Wolfe Date: 28 Aug 2008

CERTIFIED REPORT

IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	☒	☐
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?	☒	☐
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	☒	☐

COMMENTS/ OTHER INFORMATION

The pond appears to be in excellent condition. No repairs are necessary for its continued operation. It is recommended that the pond continue in use under current protocols.

CERTIFICATION STATEMENT:

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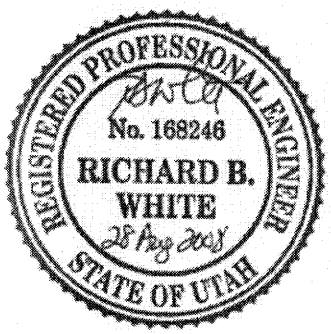
By: Richard B. White, P.E.

Full Name and Title

Signature: Richard B White Date 28 Aug 2008

P.E. Number & State 168246 (Utah)

[P.E. Cert. Stamp]



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GENERAL INFORMATION

Report Date	26 Jun 2008
Permit Number	C/007/038
Mine Name	Willow Creek Mine
Company Name	Plateau Mining Corporation

IMPOUNDMENT IDENTIFICATION

Impoundment Name	Sedimentation Pond 001
Impoundment Number	001A
UPDES Permit Number	UTG040012
MSHA ID Number	NA

IMPOUNDMENT INSPECTION

Inspection Date	18 Jun 2008
Inspected by	Richard B. White
Reason for Inspection	Quarterly

(Annual, quarterly or other periodic inspections, critical installation , or completion of construction.)

1. **Describe any appearance of any instability, structural weakness, or any other hazardous condition.**

No instability, structural weakness, or other hazardous conditions noted during the inspection.

Questions a and b are required for an impoundment, which functions as a Sedimentation pond.

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Sediment storage capacity = 4.6 AF
Maximum sediment storage elevation = 6163.7 ft
60% cleanout elevation = 6161.5 ft
60% cleanout volume = 2.8 AF

No substantial amount of sediment has accumulated in the pond since it was last cleaned out.

b. Principle and emergency spillway elevations.

Principal spillway elevation = 6171.0 ft
Emergency spillway elevation = 6172.0 ft

2. **Field Information**

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

The pond was empty at the time of the inspection, with no water flowing into or out of the pond. It does not appear that the pond has discharged since the last inspection. The pond inlet and outlets appear to be in good working condition, with no signs of erosion or structural instability. The embankment appears to be structurally sound. The spillways were not operating at the time of the inspection, but appear to be in excellent condition. Because there has been no outflow, no water samples have been collected.

3. **Field Evaluation.**

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No substantial amount of sediment has accumulated in the pond. Since much of the mine area has been reclaimed, the pond has a far greater capacity than is necessary under the regulations. It is doubtful that the pond will spill under normal conditions.

QUALIFICATION STATEMENT:

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Signature: Richard D Wolfe Date: 26 Jun 2008

CERTIFIED REPORT

IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	☒	☐
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?	☒	☐
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	☒	☐

COMMENTS/ OTHER INFORMATION

The pond appears to be in excellent condition. No repairs are necessary for its continued operation. It is recommended that the pond continue in use under current protocols.

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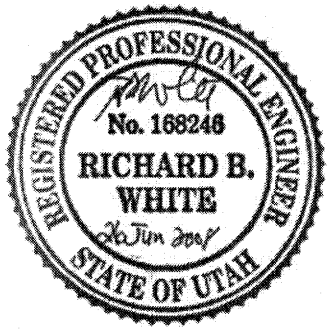
By: Richard B. White, P.E.

Full Name and Title

Signature: Richard B White Date 26 Jun 2009

P.E. Number & State 168246 (Utah)

[P.E. Cert. Stamp]



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To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the tab key to move from one field to the next. To select a check box, click in the box or type an x.

GENERAL INFORMATION

Report Date	31 Mar 2008
Permit Number	C/007/038
Mine Name	Willow Creek Mine
Company Name	Plateau Mining Corporation

IMPOUNDMENT IDENTIFICATION

Impoundment Name	Sedimentation Pond 001
Impoundment Number	001A
UPDES Permit Number	UTG040012
MSHA ID Number	NA

IMPOUNDMENT INSPECTION

Inspection Date	26 Mar 2008
Inspected by	Richard B. White
Reason for Inspection	Quarterly

(Annual, quarterly or other periodic inspections, critical installation , or completion of construction.)

1. **Describe any appearance of any instability, structural weakness, or any other hazardous condition.**

No instability, structural weakness, or other hazardous conditions noted during the inspection.

Questions a and b are required for an impoundment, which functions as a Sedimentation pond.

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Sediment storage capacity = 4.6 AF
Maximum sediment storage elevation = 6163.7 ft
60% cleanout elevation = 6161.5 ft
60% cleanout volume = 2.8 AF

No substantial amount of sediment has accumulated in the pond since it was last cleaned out.

b. Principle and emergency spillway elevations.

Principal spillway elevation = 6171.0 ft
Emergency spillway elevation = 6172.0 ft

2. **Field Information**

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

The pond was empty at the time of the inspection, with no water flowing into or out of the pond. It does not appear that the pond has discharged since the last inspection. The pond inlet and outlets appear to be in good working condition, with no signs of erosion or structural instability. The embankment appears to be structurally sound. The spillways were not operating at the time of the inspection, but appear to be in excellent condition. Because there has been no outflow, no water samples have been collected.

3. **Field Evaluation.**

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No substantial amount of sediment has accumulated in the pond. Since much of the mine area has been reclaimed, the pond has a far greater capacity than is necessary under the regulations. It is doubtful that the pond will spill under normal conditions.

QUALIFICATION STATEMENT:

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Signature: Richard D Wolf Date: 31 Mar 2008

CERTIFIED REPORT

IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	☒	☐
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?	☒	☐
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	☒	☐

COMMENTS/ OTHER INFORMATION

The pond appears to be in excellent condition. No repairs are necessary for its continued operation. It is recommended that the pond continue in use under current protocols.

CERTIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

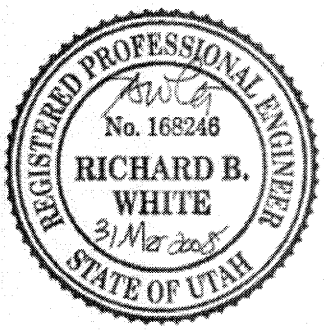
By: Richard B. White, P.E.

Full Name and Title

Signature: Richard B. White Date 31 Mar 2008

P.E. Number & State 168246 (Utah)

[P.E. Cert. Stamp]



IMPOUNDMENT 016

2008 QUARTERLY INSPECTIONS

No Access in 1st Qtr 2008
Pond removed in July of 2008

*To enter text, click in the box and type your response. If a box already contains an entry select the entry and type the replacement. You can use the **tab key to move from one field to the next.** To select a check box, click in the box or type an x.*

GENERAL INFORMATION

Report Date	26 Jun 2008
Permit Number	C/007/038
Mine Name	Willow Creek Mine - Crandall Canyon shaft
Company Name	Plateau Mining Corporation

IMPOUNDMENT IDENTIFICATION

Impoundment Name	Crandall Canyon shaft holding pond
Impoundment Number	~~NA~~ 016
UPDES Permit Number	UTG040012
MSHA ID Number	NA

IMPOUNDMENT INSPECTION

Inspection Date	18 Jun 2008
Inspected by	Richard B. White
Reason for Inspection	Quarterly

(Annual, quarterly or other periodic inspections, critical installation , or completion of construction.)

1. **Describe any appearance of any instability, structural weakness, or any other hazardous condition.**

No instability, structural weakness, or other hazardous conditions noted.

Questions a and b are required for an impoundment, which functions as a Sedimentation pond.

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

This pond is used to store water that has accumulated in the Crandall Canyon shaft, thereby allowing the shaft to be filled and reclaimed. All water that has been pumped to the pond as of the date of this report has either evaporated or seeped from the pond. If water is discharged directly from the pond in the future, it will be stored for a sufficient time to allow sediment to settle prior to discharge of the water to the adjacent channel.

b. Principle and emergency spillway elevations.

Spillway elevation = 6775.0 ft

(Only one spillway)

2. **Field Information**

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

The pond was empty at the time of the inspection, with no water flowing into or out of the pond. The pond has not discharged since the last inspection. Hence, no water samples have been collected. The pond shows no signs of erosion or structural instability. The embankment appears to be structurally sound. The spillway was not operating at the time of the inspection, but appears to be in excellent condition.

3. **Field Evaluation.**

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

Some sediment has accumulated in the pond due to the prior discharge of water from the shaft to the pond. The pond is off channel and receives no significant runoff inflow. Its use is to store water from the Crandall Canyon shaft prior to settling of sediment and eventual seepage of the water into the soil or discharge of the water to the adjacent stream channel in accordance with the UPDES permit. Additional water may be discharged from the shaft to the pond in the future, prior to final reclamation of the shaft.

QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Richard Walker Date: 26 Jun 2008

CERTIFIED REPORT

IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	☒	☐
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?	☒	☐
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	☒	☐

COMMENTS/ OTHER INFORMATION

The pond appears to be in excellent condition. No repairs are necessary for its continued use.

CERTIFICATION STATEMENT:

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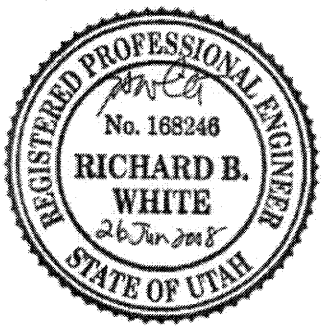
By: Richard B. White, P.E.

Full Name and Title

Signature: Richard B White Date 26 Jun 2008

P.E. Number & State 168246 (Utah)

[P.E. Cert. Stamp]



APPENDIX B

Reporting of Technical Data

Including monitoring data, reports, maps, and other information
As required under the approved plan or as required by the Division

In accordance with the requirement of R645-310-130 and R645-301-140

CONTENTS

Revegetation Monitoring at the Willow Mine

Year 4: 2008

for

Plateau Mining Corporation

Prepared by

MT. NEBO SCIENTIFIC, INC.
330 East 400 South, Suite 6
P.O. Box 337
Springville, Utah 84663
(801) 489-6937

by

Patrick Collins, Ph.D.

for

PLATEAU MINING CORPORATION
P.O. Box 92
Orangeville, Utah 84537

May 2009

TABLE OF CONTENTS

INTRODUCTION

Scope

In 2004, reclamation and revegetation activities were completed at the Willow Creek Mine area including areas called Gravel Canyon, the Refuse Pile, the Conveyor Corridor, the Riparian Bottoms and Crandall Canyon. The scope of this report is to provide results from monitoring plant establishment and preliminary revegetation success for these sites after four years of growth and establishment.

History of Vegetation Sampling

The history of vegetation data that have been compiled at the Willow Creek Mine dates back to 1981 and earlier and is difficult to follow. There have been ownership and operator changes at the mine site over that time period. Moreover, quantitative data collection methodologies have changed over time, and in most cases there are explanations for the changes. The Willow Creek Mining and Reclamation Plan (MRP) attempts to explain these changes (MRP Section 3.2.1.2). To begin, the primary vegetation dataset and report that was used for permitting was prepared for the Price River Coal Company. This reference was called *"Vegetation Data Report of Price River Coal Company's Mine Area"* (Mariah Associates 1981). In 1988, a modification of this reference was used for permitting purposes for the Blackhawk Coal Company at the Willow

Creek Mine. Later in 1989, the Castle Gate Coal Company used some of these same datasets for the Willow Creek area with subsequent permitting changes submitted in 1994. Finally, more vegetation work was conducted by the State of Utah, Division of Oil, Gas & Mining' (DOGMs), Abandoned Mine Reclamation (AMR) program where some sites were reclaimed. These sites had been disturbed prior to the Surface Mining Control and Reclamation Act of 1977 (SMRCA); the MRP refers to them as the "Reclaimed Areas" and there is no longer a bond associated with them.

Many changes have been made regarding the vegetation success standards since those early studies. Willow Creek's MRP (Section 3.2.1.2) states that "*given the changes in regulatory requirements which have occurred since much of the data was originally collected and subsequent disturbance of many of the areas previously sampled at this location, the original data cannot be used directly to comply with current vegetation baseline requirements*". For this and other plant nomenclature problems in the original dataset, the 1981 data were no longer sufficient to meet the state regulations. Accordingly, more vegetation sampling was conducted in 1994-1996 by K.A. Crofts to supplement the early vegetation data; these data can be found in an appendix in Willow Creek Mine's MRP called "*Supplemental Tables of Vegetation Sampling Data: 1994-1996*".

Sample Areas

The terminology used in the MRP for specific sample areas and the methodology criteria applied

to sample them have been described below. The following information also drove the sample design and plans made to monitor the reclaimed areas for this report.

1. **Disturbed Areas** - This refers to those areas where the plant communities were disturbed pre-SMCRA and were later re-disturbed post-SMCRA by coal mining activities. Because of this, they are regulated differently and have different revegetation success standard for final reclamation than those areas that were not re-disturbed after the Act. Both types of areas at the Willow Creek Mine site, pre-SMCRA and post-SMCRA, have now been reclaimed under appropriate state and federal regulations. The reclaimed *Disturbed Areas* were sampled to provide the 'supplemental data' (1994-96) mentioned above and were again sampled in 2008 using the same methodologies for this report. The Disturbed Areas include the following sites:

    a. Gravel Canyon
    b. Refuse Pile
    c. Conveyor Corridor

    "Baseline Data Methods" as per DOGMs *Vegetation Information Guidelines* (1992) were employed to sample these areas. More detail about these methods has been provided in the METHODS section of this report.

2. **Reclaimed Areas** - These *Reclaimed Areas* were those areas that were disturbed pre-SMCRA and not re-disturbed by more current mining activities. These areas were later reclaimed by the AML program and are therefore not subject to the monitoring program required by Plateau Mining Corporation. Accordingly, these areas were <u>not</u> required to be sampled for this 2008 monitoring report.

3. **Riparian Bottoms** - This area was first sampled in 1994 to expand on the 'supplemental data' needed. They did not have the pre-SMCRA designation. Sample methods were different than those used for the *Disturbed Areas* above (more information about this will be described in the METHODS section of this report).

4. **Crandall Canyon** - Crandall Canyon, an area also associated with the Willow Creek Mine, is located on the west side of Price Canyon rather than the east side where the other reclaimed areas are located (see Willow Creek Mine Locator Map included with this report). Revegetation standards and sampling methods are yet again different than the above-mentioned areas. Again, more details about the methodologies employed will be provided later in this report.

5. **Reference Areas** - Based on the methods employed to monitor revegetation

success and the standards that were pre-determined by representatives from the past mine operators and officials from DOGM, *Reference Areas* may or may not be used to determine adequate revegetation success at the Willow Creek Mine. Or, in other words, Reference Areas are used as success standards for some of the reclaimed areas, whereas, they are not used in other areas.

Reference Areas are those areas that were chosen earlier to be sampled at the time of final reclamation. Data from the Reference Areas and specific areas that have been reclaimed are to be compared statistically to determine whether or not successful revegetation has been achieved at the time of *Final* or Phase III Bond Release. The "Reference Area Method" has been described in DOGMs *Vegetation Information Guidelines* (1992).

The Reference Areas sampled in association with the Willow Creek Mine's monitoring plan were:

a. Mountain Brush (MB) Reference Area
b. Crandall Canyon (SB) Reference Area

The above sample areas have been described in Willow Creek's MRP. Their locations can be found on several maps provided in that document.

METHODS

Methodologies used for sampling were performed in accordance with the aforementioned guidelines provided by DOGM. For reasons described above, and depending on the sample area, there has been an assortment of methods that have been employed to sample the vegetation at the Willow Creek Mine site. We have attempted to employ sampling methods that have appropriate scientific merit and comply with all state and federal regulations and guidelines, as well as remain consistent with previous sampling methods to make the previous and current datasets comparable to each other.

Transect and Quadrat Placement

Random/regular placement of sample quadrats were designed as an attempt to provide unbiased accuracy of the data compiled. This was accomplished by establishing several transect lines along the entire length of each reclaimed area. At regular intervals along the transect lines, random numbers were generated and used to measure distances at right angles from the line to determine sample locations. Whether these random numbers were odd or even determined which side of transect line a given quadrat was placed. The random numbers selected were high enough to place quadrats to the lateral limits of each sample area and all areas in-between. This insured that the sample quadrats were placed randomly over the entire study area in an attempt to adequately address and represent each site as a whole.

Cover, Frequency and Composition

Depending on the sample area and the history of sampling it, cover estimates were made by employing two different methods. In some areas ocular methods with meter square quadrats were useds; other areas employed the point-intercept method using an inclined metal 10-point frame. Species composition and relative frequencies were also assessed from the cover data. Plant nomenclature follows "A Utah Flora" (Welsh et al. 2003).

Density

Similar to the reasons for employing different sample methods for cover, woody species density measurements also varied depending on the area. These methods were dictated by either community type, previous sampling history, or commitments about methods that were stated in the MRP. In some areas woody plant numbers were measured using a distance method called the point-quarter technique. In this method, random points were placed on the sample sites and measured into four quarters. The distances to the nearest woody plant species were then recorded in each quarter. The average point-to-individual distance was equal to the square root of the mean area per individual. In other areas densities were measured using 1.5 M x 50.0 M belt transects. Here, all woody plants were counted inside the belts; the counts were then summarized and converted into the number of individual woody plants per acre.

Biomass Production

Total annual biomass production was estimated by clipping, drying and weighing current annual growth in each sample quadrat. "Double sampling" methods were employed by placing four additional quadrats around the clipped quadrat, then estimating the production of them relative to the clipped plot. Herbaceous and woody species production were recorded separately, then combined to provide the total production estimate.

Sample Size & Adequacy

Sampling adequacy was calculated using formula given below.

$$nMIN = \frac{t^2 s^2}{(dx)^2}$$

where,

nMIN	= minimum adequate sample
t	= appropriate confidence t-value
s	= standard deviation
x	= sample mean
d	= desired change from mean

However, sample size was often more a function of the size of each sample area within the reclaimed types, or more samples taken in larger areas compared to smaller ones. When final vegetation sampling is conducted for bond release at the end of the mine owner's "Responsibility Period", similar areas will be sample separately but later treated as a whole because the reclaimed plant communities should be quite similar. For example, the data from Gravel Canyon, the Conveyor Corridor and the Refuse Pile will probably be "lumped" at that time because they have all been seeded with the same species mixture and will result in the same community type (with some variations of course, as do the natural or undisturbed native plant communities nearby). Although these areas were sampled and reported separately here to determine whether or not there are "problem areas", ultimately the datasets will be combined. We used the acreage of these three reclaimed areas – Gravel Canyon (5.75 acres), the Conveyor Corridor (29.90 acres) and the Refuse Pile (46.76 acres), then used a "weighted" method to determine sample sizes. In summary, sample sizes were determined by considering the sample adequacy formula as well as

the size of the sample area itself. Sample sizes such as the Riparian Bottoms and Crandall Canyon were determined independent of all other areas.

Photographs

Color photographs of the sample areas were taken at the time of sampling and a subset of them have been submitted with this report.

Success Standards

The sampling history above describes some of the reasons that certain methodologies were employed in specific sample areas at the Willow Creek Mine site. Often the methods to be used to monitor a given parameter were dictated by the DOGM protocol that was chosen by representatives from the past mine operators and officials from DOGM. In some areas, the "**Reference Area**" protocol as described in DOGMs *Vegetation Information Guidelines* was employed. In other areas, the "**Baseline Information**" protocol was employed (also refer to History of Vegetation Sampling above for more discussion about this).

Summary of Sampling Methods

Table 1 below lists the protocols, sampling methods employed, and sample sizes for cover,

woody species density and productivity of each sample site at the Willow Creek Mine site.

TABLE 1: Summary of Vegetation Sample Areas, Protocols, Methods and sample sizes

SAMPLE AREA	PROTOCOL	COVER (sample size)	DENSITY (sample size)	PRODUCTIVITY (sample size)
Gravel Canyon	Baseline	Point-intercept (n=10)	Belt transects (n=2)	Clipped/Wt. (n=5)
Conveyor Corridor	Baseline	Point-intercept (n=50)	Belt transects (n=10)	Clipped/Wt. (n=25)
Refuse Pile	Baseline	Point-intercept (n=75)	Belt transects (n=15)	Clipped/Wt. (n=40)
Riparian Bottomlands	Baseline	Ocular (n=30)	Point-quarter (n=30)	n/a
Crandall Canyon Reclaimed Sagebrush	Reference Area	Ocular (n=80)	Point-quarter (n=80)	n/a
Crandall Canyon (East) Reclaimed Mtn. Brush	Reference Area	Ocular (n=15)	Point-quarter (n=15)	n/a
Crandall Canyon (West) Reclaimed Mtn. Brush	Reference Area	Ocular (n=15)	Point-quarter (n=15)	n/a
Mtn. Brush (MB) Reference Area	Reference Area	Ocular (n=20)	Point-quarter (n=20)	n/a
Crandall Canyon Reference Area	Reference Area	Ocular (n=40)	Point-quarter (n=40)	n/a

RESULTS

Gravel Canyon

Quantitative sampling the vegetation at the reclaimed Gravel Canyon site in 2008 revealed that the area was dominated by fourwing saltbush (*Atriplex canescens*), thickspike wheatgrass (*Elymus lanceolatus*), and yarrow (*Achillea millefolium*). For a list of all plant species present in

sample quadrats along with their cover and frequency values, refer to Table 2.

The total living cover of this reclaimed site was estimated at 53.00% (Table 3-A). Of that living cover, shrubs comprised 30.00% of it, grasses 40.95% and forbs 29.05% (Table 3-B). The total woody species density was estimated at 1,835 individuals per acre and was dominated by sagebrush (*Artemisia tridentata*) andfourwing saltbush (Table 4). Total annual biomass production of the site was estimated to be 1,887.46 pounds per acre, with 623.56 pounds coming from herbaceous species and 1,263.90 pounds from woody plants (Table 5).

Conveyor Corridor

The reclaimed Conveyor Corridor was dominated by thickspike wheatgrass, bluebunch wheatgrass (*Elymus spicatus*) and fourwing saltbush. For a list of the plant species present in sample quadrats along with their cover and frequency values, refer to Table 6.

The total living cover for this reclaimed site was estimated to be 43.60% (Table 7-A). The composition of the cover by lifeform was 59.30% grasses, 18.40% forbs and 22.30% shrubs (Table 7-B). Table 8 shows the woody species density in this area consisted of 1,165 individuals per acre with the dominants for this parameter consisting of fourwing saltbush, sagebrush, and rubber rabbitbrush (*Chrysothamnus nauseosus*). Productivity for the site was estimated at 1,569.50 pounds per acre with 573.76 pounds coming from herbaceous and 995.74 pounds from woody species (Table 9).

Refuse Pile

Quantitative sampling the vegetation at the reclaimed Refuse pile showed that the area was dominated by fourwing saltbush, thickspike wheatgrass and Palmer penstemon (*Penstemon palmeri*). For a list of all plant species present in sample quadrats along with their cover and frequency values, refer to Table 10.

The total living cover of this reclaimed site was estimated at 45.87% (Table 11-A). In that living cover, shrubs comprised 24.58%, grasses 51.09% and forbs 24.33% (Table 11-B). The total woody species density was estimated at 1,691 individuals per acre and was dominated by fourwing saltbush (Table 12). Total annual biomass production of the site was estimated to be 709.42 pounds per acre, with 349.05 pounds coming from herbaceous species and 360.37 pounds from woody plants (Table 13).

Riparian Bottoms

The reclaimed Riparian Bottoms were greatly dominated by coyote willow (*Salix exigua*). For a list of the plant species present in sample quadrats along with their cover and frequency values, refer to Table 14.

The total living cover (overstory and understory cover combined) for this reclaimed site was estimated to be 71.33% (Table 15-A). The composition of the understory cover by lifeform was

3.00% grasses, 2.33% forbs and 94.67% shrubs (Table 15-B). Table 16 shows the woody species density in this area consisted of 4,168 individuals per acre with the dominants here consisting of coyote willow, Wood's rose (*Rosa woodsii*) and golden current (*Ribes aureum*). Productivity measurements were not required in 2008 for this area

Crandall Canyon Sagebrush Areas

Cover by plant species for these reclaimed areas, the Sagebrush Areas in Crandall Canyon, are shown in Table 17. These results indicated that the area was dominated by big sagebrush, Lewis' flax (*Linum lewisii*), and western wheatgrass (*Elymus smithii*).

The total living cover of the reclaimed site was estimated at 50.00% (Table 18-A). In that living cover, shrubs comprised 26.34%, grasses 42.12% and forbs 31.55% (Table 18-B). The total woody species density was estimated at 6,874 individuals per acre and was dominated by fourwing saltbush (Table 19).

Crandall Canyon Mtn. Brush Areas (East)

Two different areas were reclaimed as the Mountain Brush community type in Crandall Canyon. They were sampled separately to identify any differences or "problem areas" at each site. Consequently, the data were also reported separately in this report.

Quantitative sampling the reclaimed Mtn. Brush (East) site in Crandall Canyon revealed that the area was dominated by Gt. Basin wildrye (*Elymus cinereus*) and big sagebrush (Table 20).

The total living cover of this reclaimed community was estimated at 58.33% (Table 21-A). Of the living cover, the composition was comprised of shrubs at 19.47%, grasses were 64.59% and forbs were 15.94% (Table 21-B). The total woody species density was estimated at 3,359 individuals per acre and was dominated by sagebrush (Table 22).

Crandall Canyon Mtn. Brush Areas (West)

The other reclaimed Mountain Brush site that was sampled in Crandall Canyon was located west of the first site. Quantitative sampling the this site suggested that the area was dominated by similar species as the east site, Salina wildrye and big sagebrush, but there were other species that had values that were very close to these two species such as thickspike wheatgrass, western wheatgrass and Indian ricegrass (*Stipa hymenoides*). For a list of all plant species present in sample quadrats along with their cover and frequency values, refer to Table 23.

The total living cover of this reclaimed site was estimated at 49.67% (Table 24-A). Of that living cover, shrubs represented 16.94% of it, whereas grasses and forbs were represented at 54.51% and 28.55%, respectively (Table 24-B). The total woody species density was estimated at 5,706 individuals per acre and was dominated by big sagebrush and black sagebrush (*Artemisia nova*). Results from woody species density measurements can be found on Table 25.

Crandall Canyon Mtn. Brush (MB) Reference Area

When DOGMs "Reference Area" protocol was employed, the reclaimed areas are to be compared to communities that have been chosen to represent standards for final revegetation success with the areas that were disturbed and reclaimed by mining operations. The reference area to be compared to the reclaimed Mtn. Brush communities in Crandall Canyon was called the Mountain Brush (MB) Reference Area. This reference area, however, is located near the old Conveyor Corridor and some of the surface facilities of the Willow Creek Mine on the east side of Price Canyon rather than the west side where Crandall Canyon is located.

Cover and frequency by plant species for this reference area is shown in Table 26. Sampling results in this area indicated that it was dominated by Salina wildrye by quite a wide margin, but followed by big sagebrush and Indian ricegrass. The tree and shrub species present in this community, probably the reason for labeling it a "Mtn. Brush Reference Area", were Utah Juniper *(Juniperus osteosperma)*, pinyon-pine (*Pinus edulis*) and Utah serviceberry (*Amelanchier utahensis*).

The total living cover (including overstory and understory cover combined) of this reference area was estimated at 36.25% (Table 27-A). In that living cover, shrubs comprised 32.55%, grasses 64.78% and forbs 2.67% (Table 27-B). The total woody species density was estimated at 2,488 individuals per acre and was dominated by big sagebrush, Utah serviceberry, broom snakeweed (*Gutierrezia sarothrae*) and Utah juniper (Table 28).

Crandall Canyon (SB) Reference Area

The reference area to be compared to the Reclaimed Sagebrush communities in Crandall Canyon was called the Crandall Canyon Reference Area. Like the above reference area, this reference area is located at the Willow Creek Mine on the east side of Price Canyon rather than the west side where Crandall Canyon is located. The locations of the two reference areas, the Crandall Canyon Mtn. Brush (MB) Reference Area and the Crandall Canyon (SB) Reference Area, are shown on maps in the Willow Creek Mine MRP, but a general locator map of the permit area including Crandall Canyon that was prepared by DOGM has been included with this report.

Cover and frequency by plant species for this reference area are shown in Table 29. Similar to the aforementioned reference area, sampling results in the area show that this reference area was dominated by Salina wildrye by quite a wide margin, but followed by big sagebrush. However, the remaining species present in the quadrats were less similar than the other reference area.

The total living cover of this reference area was estimated at 37.88% (Table 30-A). In that living cover, shrubs comprised 27.45%, grasses 63.75% and forbs 8.79% (Table 30-B). The total woody species density was estimated at 857 individuals per acre and was dominated by big sagebrush, Utah serviceberry, broom snakeweed (*Gutierrezia sarothrae*) and fourwing saltbrush (Table 31).

DISCUSSION

Willow Creek Mine Disturbed Areas

The so-called "Disturbed Areas" at the Willow Creek Mine site are comprised of reclaimed areas including: 1) Gravel Canyon, 2) the Conveyor Corridor and 3) the Refuse Pile. The reclaimed Riparian Bottoms have also been included in the Willow Creek monitoring regime. Because the protocol for revegetation success standards here employed the *Baseline Method*, comparisons were made between revegetation success standards [or baseline datasets (1994-96)] and current datasets (2008). Fig. 1 illustrates that the **total living cover** values of the current dataset were greater than that of the baseline data. The **woody species density** values of the these same areas were also greater in the current dataset when compared to the baseline standards (Fig. 2). Finally, annual biomass production of the Disturbed Areas were also compared graphically (Fig. 3). The current productivity estimates greatly exceeded those shown in the baseline dataset.

Crandall Canyon Areas

The reclaimed areas in Crandall Canyon consisted of: 1) Sagebrush Areas, 2) Mtn. Brush Areas (East), and 3) Mtn. Brush Areas (West). The protocol to measure revegetation success in these areas employed the "Reference Area" method. This method uses pre-determined reference areas, or undisturbed plant communities chosen to represent future revegetation success standards.

Two reference areas were chosen to be compared with the reclaimed areas of Crandall Canyon including: 1) the Mountain Brush (MB) Reference Area and 2) the Crandall Canyon (SB) Reference Area. Graphic illustrations comparing the **total living cover** of the reclaimed areas in Crandall Canyon with their respective reference areas show that the reclaimed areas have exceeded their standard for revegetation success (Fig. 4). Furthermore, **woody species density** values of the reclaimed sites in Crandall Canyon also far exceeded those of the reference area (Fig. 5). Annual biomass production was not needed for this sample period when the Reference Area method is employed. This parameter will be measured at the end of the Responsibility Period prior to Phase III or Final Bond Release applications are submitted.

SUMMARY & CONCLUSIONS

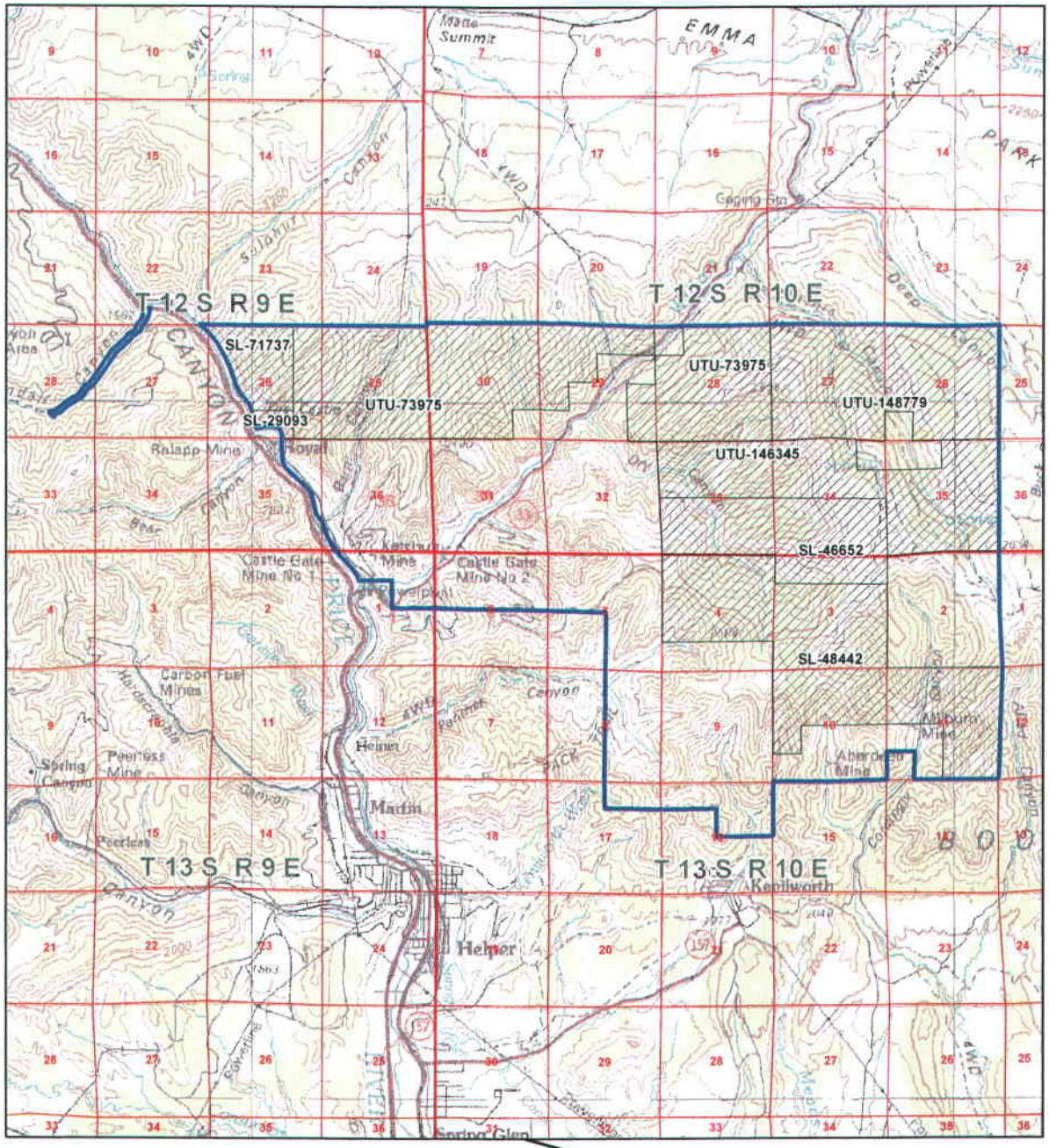
Plant communities disturbed by mining operations at the Willow Creek Mine site have been reclaimed for four years now. These areas were sampled in 2008 to provide Year 4 data for comparisons with the revegetation success standards, the standards that will ultimately be used to determine whether or not final bond release is warranted and the end of the owner's Responsibility Period.

Depending on the specific reclaimed area and the protocol required to determine revegetation success standards (Baseline Method or Reference Area Method) the following parameters were compared: 1) total living cover, 2) woody species density and 3) annual biomass productivity. In

all cases, the reclaimed areas met or exceeded those of the success standards.

Although the parameters mentioned above are the principal values used to determine revegetation success, other indicators can also be used from the datasets. For example, species diversity, cover and frequency values, presence of "desirable" plant species versus "weedy" or exotic species, and species composition can be compared between the reclaimed areas and their respective success standards. In all instances, the reclaimed areas appear to be progressing very well to becoming communities that are "diverse, effective and permanent" as required by state regulations for land once disturbed by coal mining operations.

WILLOW CREEK MINE LOCATOR MAP



Willow Creek Mine

C0070038
Carbon County, Utah
January 2006

Township 12 South Range 9 & 10 East
Township 13 South Range 9 & 10 East

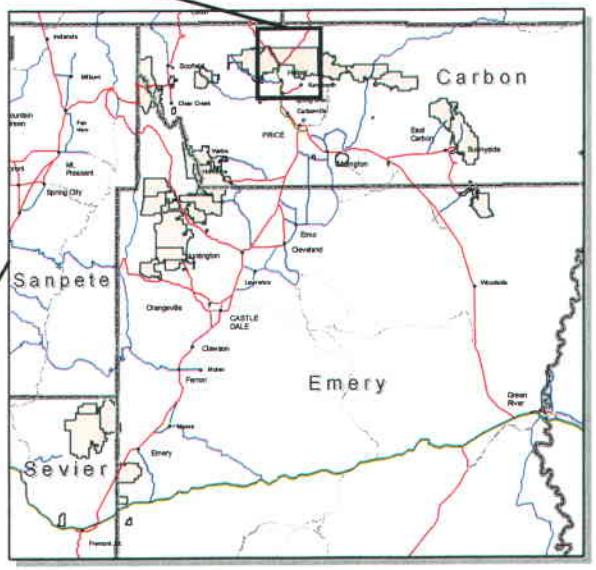
File: N:/gis/coal/coalareamaps/C0070038.pdf

Permit Area
Proposed Mine Plan Modification (If shown)
Federal Lease Areas

0 0.4 0.8 1.6 Miles

1:60,000

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining



Locator Map

DATA SUMMARY TABLES

Table 2: Willow Creek Mine Area. Living Cover and Frequency by Plant Species (2008).

Gravel Canyon			n=10
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Atriplex canescens	19.00	29.82	30.00
FORBS			
Achillea millefolium	9.00	15.78	30.00
Machaeranthera canescens	2.00	6.00	10.00
Penstemon palmeri	2.00	6.00	10.00
GRASSES			
Elymus lanceolatus	14.00	18.00	30.00
Elymus smithii	2.00	6.00	10.00
Elymus spicatus	4.00	12.00	10.00
Stipa hymenoides	1.00	3.00	10.00

Table 3: Willow Creek Mine Area. Total Cover and Composition (2008).		
Gravel Canyon		n=10
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	53.00	15.52
Litter	15.00	12.04
Bareground	13.00	11.87
Rock	19.00	13.00
B. % COMPOSITION		
Shrubs	30.00	45.83
Forbs	29.05	35.69
Grasses	40.95	40.39

Table 4: Willow Creek Mine Area.
Woody Species Density (2008).

Gravel Canyon	n=2
SPECIES	**Individuals Per Acre**
Artemisia tridentata	593.53
Atriplex canescens	1187.07
Ceratoides lanata	53.96
TOTAL	**1834.56**

Table 5: Willow Creek Mine Area. Annual Production (2008).

Gravel Canyon		n=5
	Pounds/Acre	
LIFEFORM	Mean	Std. Dev.
Herbaceous	623.56	249.09
Woody	1263.90	655.38
TOTAL	**1887.46**	**680.65**

Table 6: Willow Creek Mine Area. Living Cover and Frequency by Plant Species (2008).

Conveyor Corridor (Reclaimed)			n=50
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Atriplex canescens	9.20	19.68	22.00
Artemisia tridentata	0.20	1.40	2.00
Chrysothamnus nauseosus	2.40	9.71	6.00
FORBS			
Achillea millefolium	0.80	2.71	8.00
Halogeton glomeratus	0.40	2.80	2.00
Linum lewisii	2.40	8.14	10.00
Machaeranthera canescens	0.40	2.80	2.00
Penstemon palmeri	2.00	6.63	10.00
Salsola tragus	1.20	5.88	4.00
GRASSES			
Bromus tectorum	0.60	3.10	4.00
Elymus lanceolatus	10.40	15.49	38.00
Elymus smithii	0.40	2.80	2.00
Elymus spicatus	9.80	17.49	30.00
Stipa hymenoides	3.40	8.86	16.00

Table 7: Willow Creek Mine Area. Total Cover and Composition (2008).		
Conveyor Corridor (Reclaimed)		n=50
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	43.60	13.82
Litter	16.20	15.48
Bareground	13.60	11.45
Rock	26.60	17.84
B. % COMPOSITION		
Shrubs	22.30	36.89
Forbs	18.40	34.81
Grasses	59.30	42.68

Table 8: Willow Creek Mine Area. Woody Species Density (2008).

Conveyor Corridor (Reclaimed)	n=10
SPECIES	Individuals Per Acre
Artemisia tridentata	151.08
Atriplex canescens	766.20
Ceratoides lanata	37.77
Cercocarpus ledifolius	5.40
Chrysothamnus nauseosus	205.04
TOTAL	1165.48

Table 9: Willow Creek Mine Area. Annual Production (2008).

Conveyor Corridor (Reclaimed)		n=25
	Pounds/Acre	
LIFEFORM	Mean	Std. Dev.
Herbaceous	573.76	426.87
Woody	995.74	936.29
TOTAL	**1569.50**	**823.67**

Table 10: Willow Creek Mine Area. Living Cover and Frequency by Plant Species (2008).

Refuse Pile (Reclaimed)			n=75
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Atriplex canescens	13.87	24.92	30.67
Artemisia tridentata	0.53	3.22	2.67
Chrysothamnus nauseosus	0.27	2.29	1.33
FORBS			
Achillea millefolium	0.27	2.29	1.33
Penstemon palmeri	5.20	12.15	21.33
Linum lewisii	3.33	8.38	14.67
Halogeton glomeratus	0.53	3.22	2.67
Melilotus officinalis	0.40	3.44	1.33
GRASSES			
Elymus smithii	1.47	7.06	5.33
Elymus spicatus	3.47	9.59	14.67
Elymus lanceolatus	12.67	15.86	49.33
Stipa hymenoides	1.47	5.82	6.67
Elymus cinereus	1.47	7.95	4.00
Bromus carinatus	0.93	5.21	4.00

Table 11: Willow Creek Mine Area. Total Cover and Composition (2008).		
Refuse Pile (Reclaimed)		n=75
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	45.87	16.90
Litter	14.13	15.15
Bareground	14.80	13.60
Rock	25.20	17.92
B. % COMPOSITION		
Shrubs	24.58	39.61
Forbs	24.33	36.04
Grasses	51.09	42.81

Table 12: Willow Creek Mine Area.
Woody Species Density (2008).

Refuse Pile (Reclaimed)	n=15
SPECIES	**Individuals Per Acre**
Artemisia tridentata	39.57
Atriplex canescens	1557.58
Ceratoides lanata	17.99
Chrysothamnus nauseosus	75.54
TOTAL	1690.67

Table 13: Willow Creek Mine Area. Annual Production (2008).

Refuse Pile (Reclaimed)		n=40
	Pounds/Acre	
LIFEFORM	Mean	Std. Dev.
Herbaceous	349.05	229.77
Woody	360.37	359.30
TOTAL	**709.42**	**280.19**

Table 14: Willow Creek Mine Area. Living Cover and Frequency by Plant Species (2008).

Riparian Bottoms (Reclaimed)			n=30
OVERSTORY	Mean Percent	Standard Deviation	Percent Frequency
TREES & SHRUBS			
Salix exigua	12.33	19.35	33.33
UNDERSTORY			
TREES & SHRUBS			
Artemisia tridentata	0.33	1.25	6.67
Atriplex canescens	0.17	0.90	3.33
Chrysothamnus nauseosus	1.17	4.78	6.67
Populus fremontii	1.67	8.98	3.33
Ribes aureum	5.83	12.18	20.00
Rosa woodsii	6.17	14.24	20.00
Salix exigua	41.17	28.39	83.33
FORBS			
Melilotus officinale	0.33	1.80	3.33
Penstemon palmeri	0.83	3.67	6.67
GRASSES			
Elymus elymoides	0.33	1.80	3.33
Elymus lanceolatus	0.67	2.13	10.00
Elymus spicatus	0.33	1.80	3.33

Table 15: Willow Creek Mine Area. Total Cover		
Riparian Bottoms (Reclaimed)		n=30
A. TOTAL COVER	Mean Percent	Standard Deviation
Overstory (o)	12.33	19.35
Understory (u)	59.00	18.18
Litter	9.00	7.43
Bareground	14.07	12.19
Rock	17.93	14.40
o+u	71.33	23.31
B. % COMPOSITION		
Shrubs	94.67	18.46
Forbs	2.33	10.86
Grasses	3.00	8.76

Table 16: Willow Creek Mine Area.
Woody Species Density (2008).

Riparian Bottoms (Reclaimed)	n=30
SPECIES	**Individuals Per Acre**
Artemisia tridentata	138.92
Atriplex canescens	69.46
Chrysothamnus nauseosus	243.11
Populus fremontii	34.73
Prunus virginiana	34.73
Ribes aureum	729.32
Rosa woodsii	729.32
Salix exigua	2187.95
TOTAL	4167.53

Table 17: Crandall Canyon Area. Living Cover and Frequency by Plant Species (2008).

Sagebrush/Grass (Reclaimed)			n=80
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Artemisia nova	0.94	4.68	5.00
Artemisia tridentata	10.85	8.82	76.25
Cercocarpus ledifolius	1.10	3.51	12.50
Chrysothamnus nauseosus	0.50	3.22	2.50
FORBS			
Achillea millefolium	0.19	0.95	3.75
Artemisia ludoviciana	1.38	3.26	18.75
Aster chilensis	1.25	3.67	11.25
Linum lewisii	7.05	7.24	67.50
Melilotus officinalis	2.31	4.81	28.75
Penstemon palmeri	0.06	0.56	1.25
Penstemon sp.	2.31	4.61	26.25
GRASSES			
Bromus carinatus	0.56	3.06	5.00
Elymus cinereus	4.66	9.12	32.50
Elymus junceus	0.88	5.69	2.50
Elymus lanceolatus	4.35	7.95	37.50
Elymus smithii	4.40	6.59	42.50
Elymus spicatus	3.71	7.82	28.75
Poa secunda	2.69	4.81	27.50
Stipa hymenoides	0.81	4.36	5.00

Table 18: Crandall Canyon Area. Total Cover and Composition (2008).		
Sagebrush/Grass (Reclaimed)		n=80
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	50.00	11.67
Litter	14.31	7.28
Bareground	11.81	5.71
Rock	23.88	12.07
B. % COMPOSITION		
Shrubs	26.34	18.53
Forbs	31.55	23.70
Grasses	42.12	25.01

Table 19: Crandall Canyon Area. Woody Species Density (2008).

Sagebrush/Grass (Reclaimed)	n=80
SPECIES	Individuals Per Acre
Artemisia nova	601.43
Artemisia tridentata	5305.48
Cercocarpus ledifolius	859.19
Chrysothamnus nauseosus	64.44
Gutierrezia sarothrae	21.48
Pinus edulis	21.48
TOTAL	6873.50

Table 20: Crandall Canyon Area. Living Cover and Frequency by Plant Species (2008).

Mountain Brush - East (Reclaimed)			n=15
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Artemisia tridentata	10.00	10.17	60.00
Cercocarpus ledifolius	0.67	2.49	6.67
Chrysothamnus nauseosus	0.67	2.49	6.67
FORBS			
Artemisia ludoviciana	2.00	5.10	20.00
Iva axillaris	0.33	1.25	6.67
Linum lewisii	3.67	4.64	40.00
Melilotus officinalis	0.67	2.49	6.67
Penstemon sp.	1.67	3.94	20.00
GRASSES			
Elymus cinereus	20.67	22.28	80.00
Elymus lanceolatus	5.67	8.54	40.00
Elymus smithii	5.00	7.53	33.33
Elymus spicatus	5.33	8.06	33.33
Poa secunda	2.00	5.10	13.33

Table 21: Crandall Canyon Area. Total Cover and Composition (2008).		
Mountain Brush - East (Reclaimed)		n=15
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	58.33	10.75
Litter	18.33	7.89
Bareground	14.33	10.47
Rock	9.00	4.90
B. % COMPOSITION		
Shrubs	19.47	18.31
Forbs	15.94	19.01
Grasses	64.59	25.18

Table 22: Crandall Canyon Area. Woody Species Density (2008).

Mountain Brush - East (Reclaimed)	n=15
SPECIES	**Individuals Per Acre**
Artemisia tridentata	3078.77
Cercocarpus ledifolius	55.98
Chrysothamnus nauseosus	223.91
TOTAL	3358.66

Table 23: Crandall Canyon Area. Living Cover and Frequency by Plant Species (2008).

Mountain Brush - West (Reclaimed)			n=15
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Artemisia nova	2.00	4.40	20.00
Artemisia tridentata	5.67	9.29	40.00
Cercocarpus ledifolius	1.20	3.08	13.33
FORBS			
Artemisia ludoviciana	0.67	1.70	13.33
Aster chilensis	2.00	5.10	20.00
Linum lewisii	4.00	6.11	40.00
Machaeranthera canescens	1.33	4.99	6.67
Melilotus officinalis	2.00	6.27	13.33
Penstemon sp.	3.33	4.71	40.00
GRASSES			
Bromus carinatus	0.33	1.25	6.67
Elymus cinereus	7.33	9.46	53.33
Elymus lanceolatus	5.47	8.27	46.67
Elymus smithii	5.00	6.83	46.67
Elymus spicatus	3.00	11.22	6.67
Poa secunda	2.33	6.55	13.33
Stipa hymenoides	4.00	9.35	20.00

Table 24: Crandall Canyon Area. Total Cover and Composition (2008).		
Mountain Brush - West (Reclaimed)		n=15
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	49.67	10.24
Litter	15.33	10.08
Bareground	11.67	8.69
Rock	23.33	11.79
B. % COMPOSITION		
Shrubs	16.94	19.81
Forbs	28.55	20.10
Grasses	54.51	22.82

Table 25: Crandall Canyon Area.
Woody Species Density (2008).

Mountain Brush - West (Reclaimed)	n=15
SPECIES	**Individuals Per Acre**
Artemisia nova	855.92
Artemisia tridentata	4279.61
Cercocarpus ledifolius	475.51
Chrysothamnus nauseosus	95.10
TOTAL	5706.15

Table 26: Crandall Canyon Mountain Brush (MB) Reference Area (located near Willow Creek Mine Area). Living Cover and Frequency by Plant Species (2008).

Mountain Brush (MB) Reference Area			n=20
OVERSTORY	Mean Percent	Standard Deviation	Percent Frequency
TREES & SHRUBS			
Juniperus osteosperma	1.75	5.31	10.00
Pinus edulis	1.00	4.36	5.00
UNDERSTORY			
TREES & SHRUBS			
Amelanchier utahensis	0.50	2.18	5.00
Artemisia nova	0.50	2.18	5.00
Artemisia tridentata	6.50	7.26	50.00
Atriplex canescens	0.75	3.27	5.00
Gutierrezia sarothrae	1.25	3.49	15.00
Juniperus osteosperma	1.50	3.91	15.00
Pinus edulis	0.25	1.09	5.00
FORBS			
Machaeranthera grindelioides	0.75	2.38	10.00
GRASSES			
Elymus salinus	15.25	9.93	85.00
Stipa hymenoides	6.25	7.22	55.00

Table 27: Crandall Canyon Mountain Brush (MB) Reference Area (located near Willow Creek Mine Area). Total Cover and Composition (2008).		
Mountain Brush (MB) Reference Area		n=20
A. TOTAL COVER	Mean Percent	Standard Deviation
Overstory (o)	2.75	6.61
Understory (u)	33.50	7.76
Litter	19.25	5.97
Bareground	17.00	11.11
Rock	30.25	10.78
o+u	36.25	6.68
B. % COMPOSITION		
Shrubs	32.55	23.56
Forbs	2.67	8.27
Grasses	64.78	22.13

Table 28: Crandall Canyon Mountain Brush (MB) Reference Area (located near Willow Creek Mine Area). Woody Species Density (2008).

Mountain Brush (MB) Reference Area	n=20
SPECIES	**Individuals Per Acre**
Amelanchier utahensis	217.67
Artemisia tridentata	1554.75
Artemisia nova	186.57
Atriplex confertifolia	31.10
Atriplex canescens	31.10
Ephedra viridis	31.10
Gutierrezia sarothrae	186.57
Juniperus osteosperma	186.57
Pinus edulis	62.19
TOTAL	2487.61

Table 29: Willow Creek Mine Area. Living Cover and Frequency by Plant Species (2008)

Crandall Canyon (SB) Reference Area			n=40
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Artemisia tridentata	5.50	11.00	22.50
Atriplex canescens	3.13	9.47	12.50
Atriplex confertifolia	0.13	0.78	2.50
Chrysothamnus nauseosus	1.00	6.24	2.50
Ephedra viridis	0.75	4.68	2.50
FORBS			
Artemisia ludoviciana	3.13	8.04	20.00
Machaeranthera grindelioides	0.26	1.58	2.50
GRASSES			
Bouteloua gracilis	0.13	0.78	2.50
Bromus tectorum	1.75	4.12	20.00
Elymus salinus	20.38	15.71	75.00
Stipa comata	1.75	5.07	12.50

Table 30: Willow Creek Mine Area. Total Cover and Composition (2008).		
Crandall Canyon (SB) Reference Area		n=40
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	37.88	7.06
Litter	13.75	9.86
Bareground	8.25	5.43
Rock	40.13	13.11
B. % COMPOSITION		
Shrubs	27.45	38.01
Forbs	8.79	21.69
Grasses	63.75	38.66

Table 31: Willow Creek Mine Area.
Woody Species Density (2008).

Crandall Canyon (SB) Reference Area	n=40
SPECIES	**Individuals Per Acre**
Amelanchier utahensis	5.36
Artemisia tridentata	503.73
Atriplex confertifolia	16.08
Atriplex canescens	203.64
Chrysothamnus nauseosus	21.44
Ephedra viridis	48.23
Opuntia polyacantha	53.59
Yucca harrimaniae	5.36
TOTAL	857.42

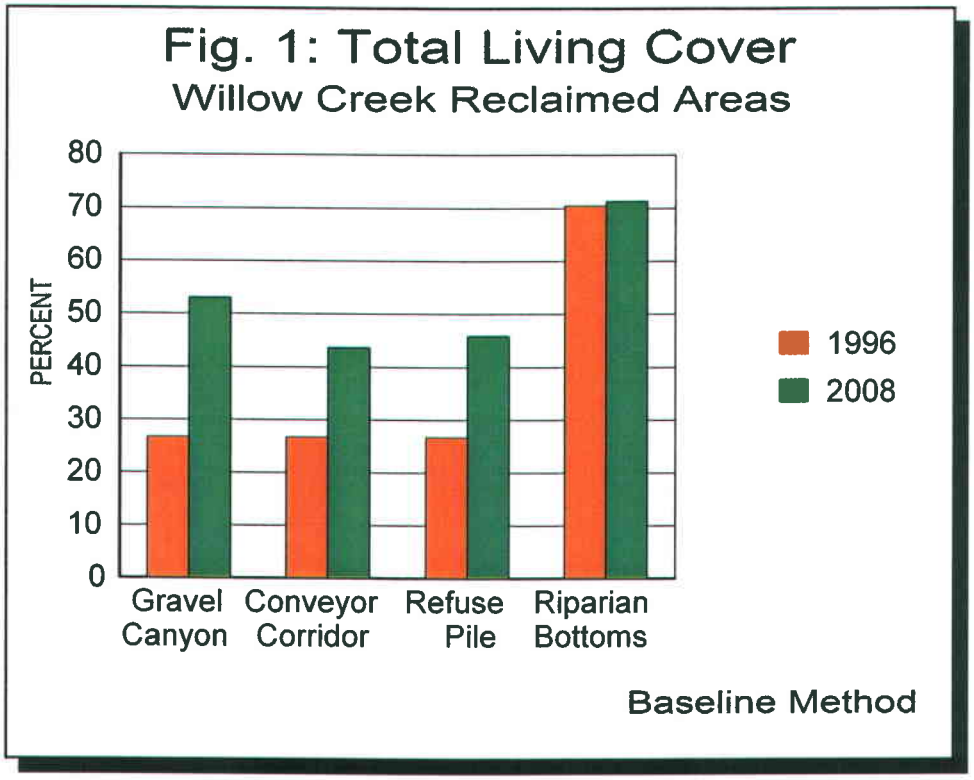


Fig. 1: Total Living Cover
Willow Creek Reclaimed Areas
PERCENT
80
70
60
50
40
30
20
10
0
Gravel Canyon
Conveyor Corridor
Refuse Pile
Riparian Bottoms
1996
2008
Baseline Method

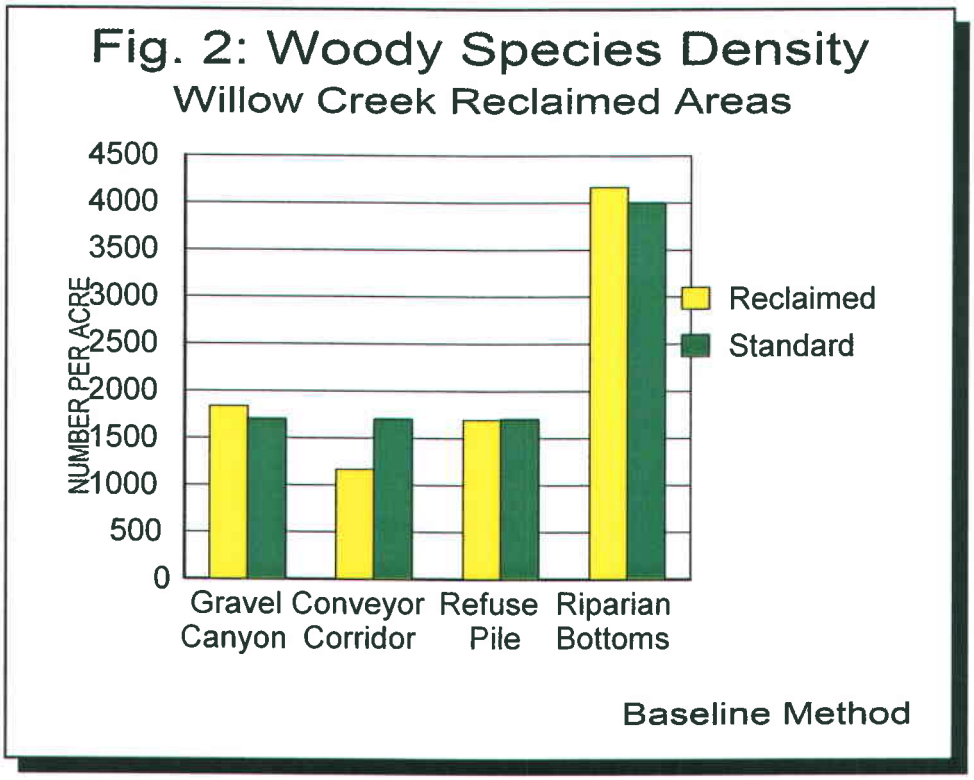


Fig. 2: Woody Species Density
Willow Creek Reclaimed Areas
4500
4000
3500
3000
2500
2000
1500
1000
500
0
NUMBER PER ACRE
Gravel Canyon
Conveyor Corridor
Refuse Pile
Riparian Bottoms
Reclaimed
Standard
Baseline Method

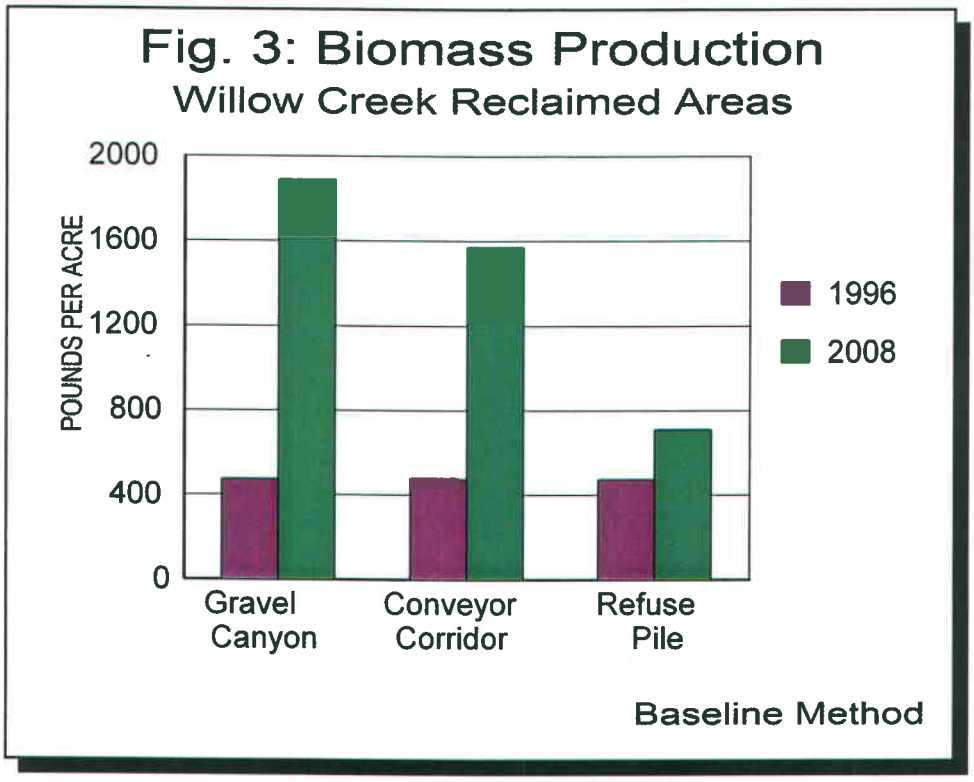


Fig. 3: Biomass Production
Willow Creek Reclaimed Areas
2000
1600
1200
800
400
0
POUNDS PER ACRE
Gravel Canyon
Conveyor Corridor
Refuse Pile
1996
2008
Baseline Method

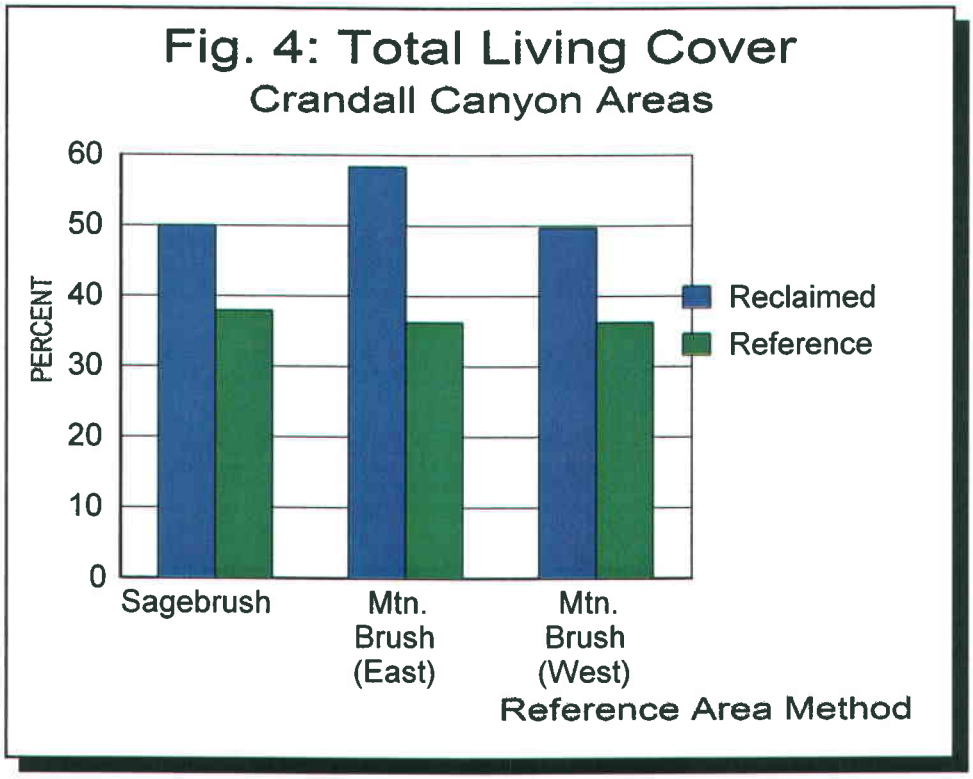


Fig. 4: Total Living Cover
Crandall Canyon Areas
60
50
40
30
20
10
0
PERCENT
Sagebrush
Mtn. Brush (East)
Mtn. Brush (West)
Reclaimed
Reference
Reference Area Method

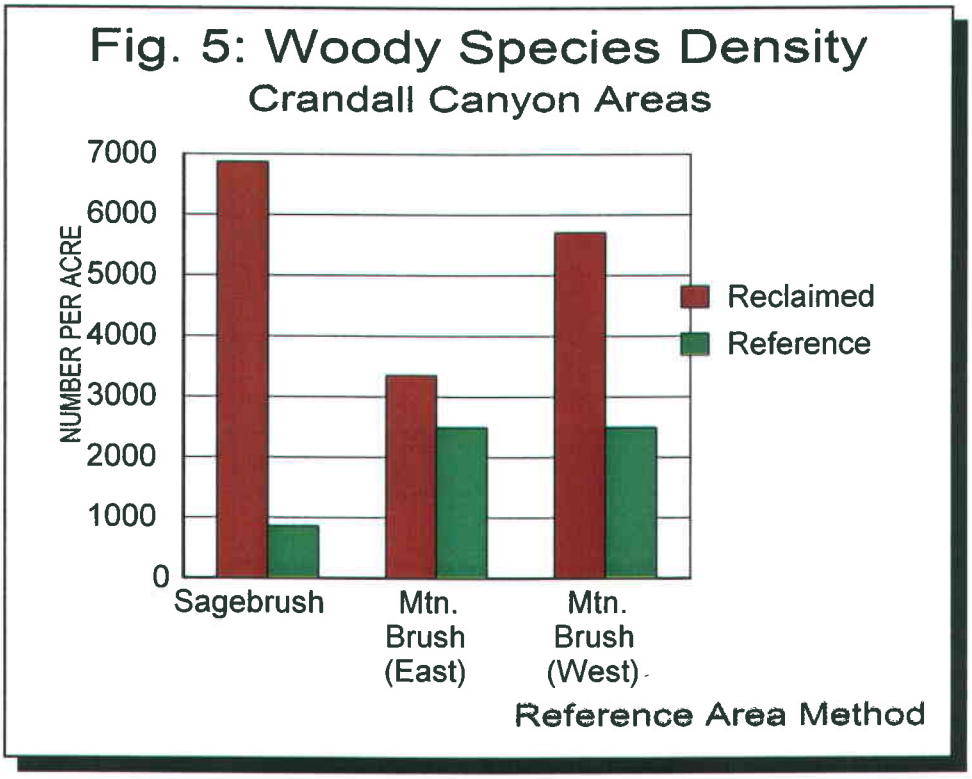
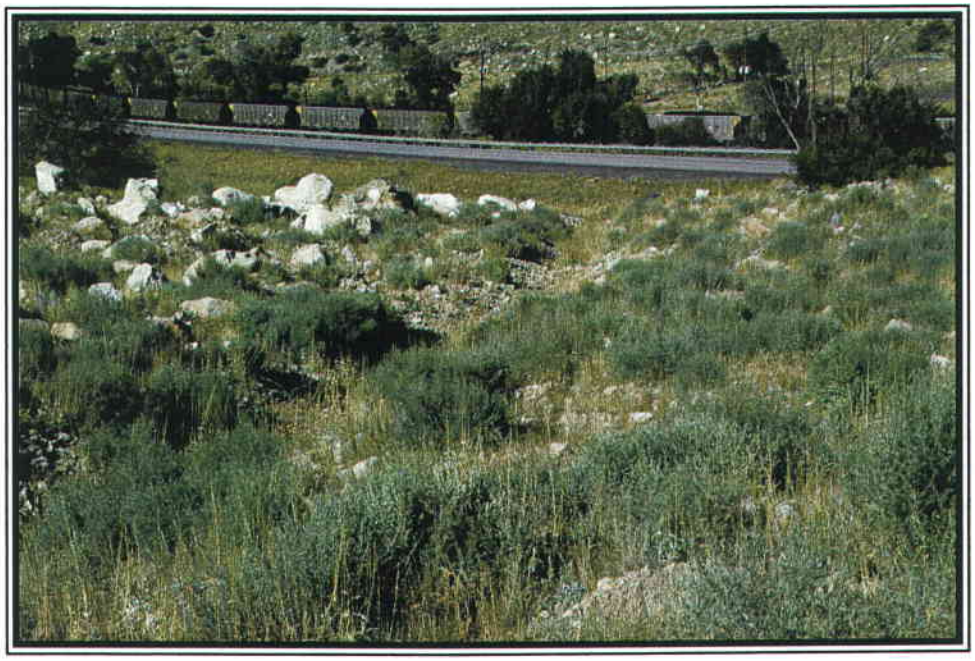
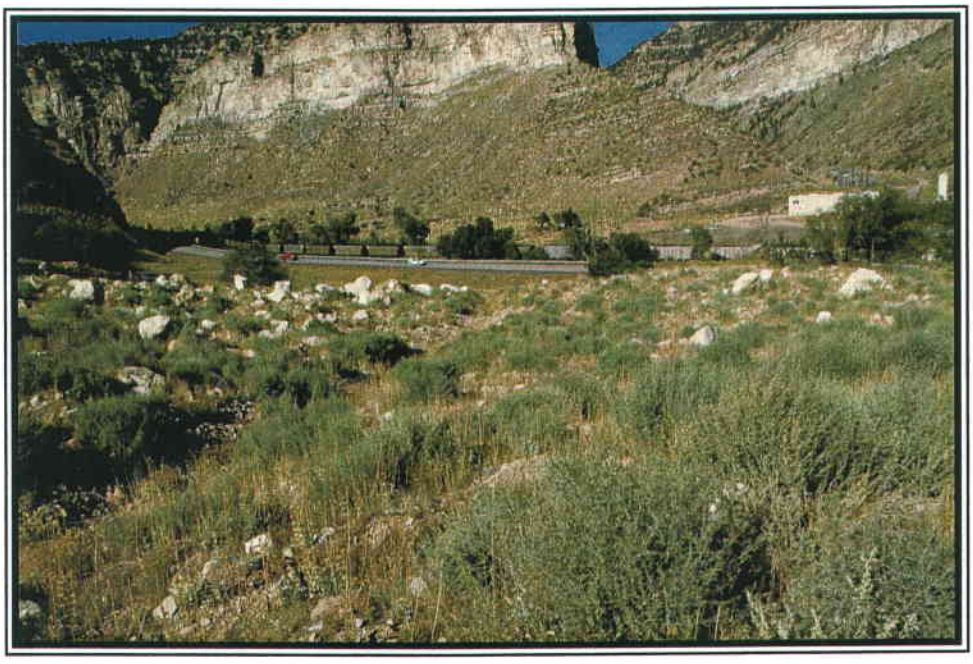


Fig. 5: Woody Species Density
Crandall Canyon Areas
NUMBER PER ACRE
7000
6000
5000
4000
3000
2000
1000
0
Sagebrush
Mtn. Brush (East)
Mtn. Brush (West)
Reclaimed
Reference
Reference Area Method

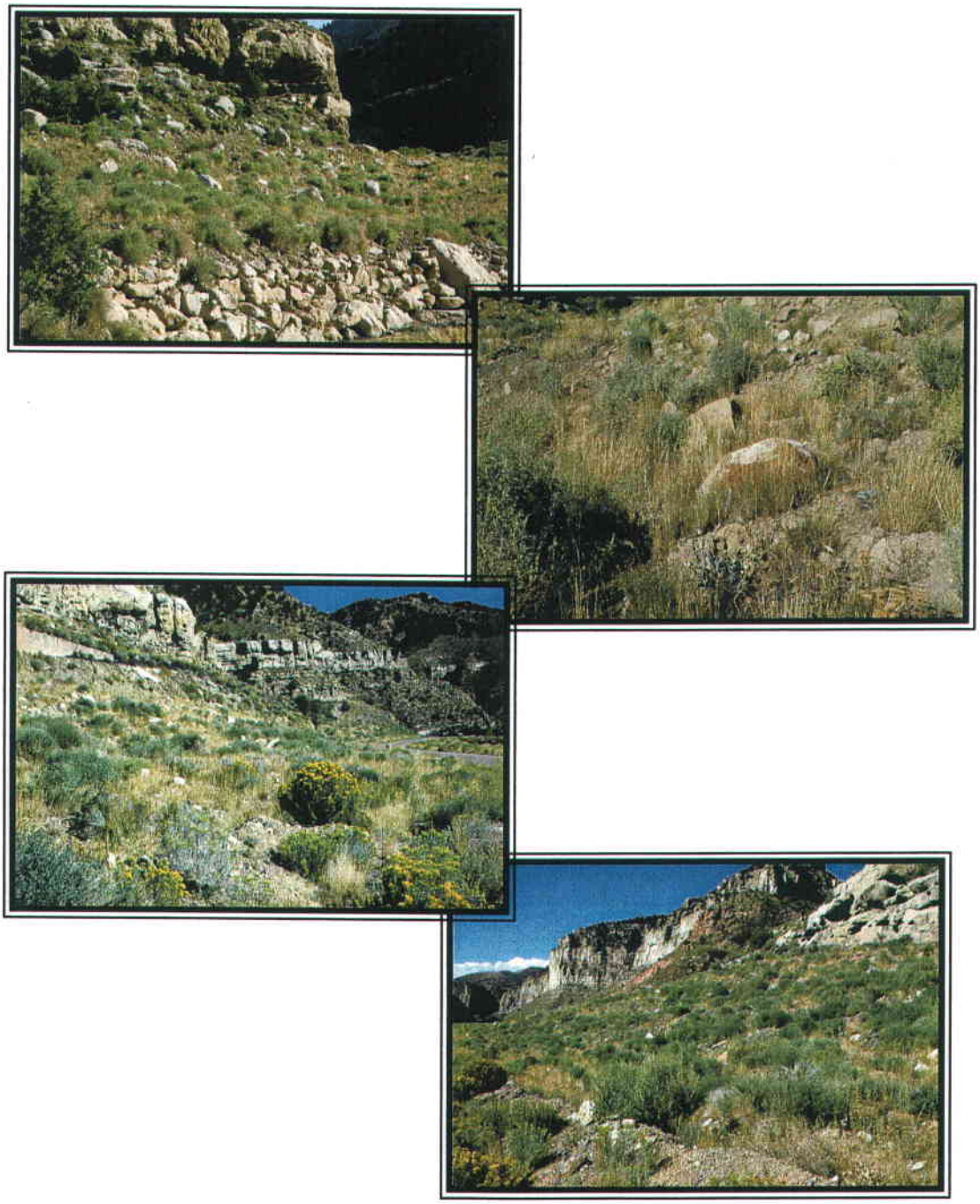
COLOR PHOTOGRAPHS OF THE SAMPLE AREAS

WILLOW CREEK RECLAIMED GRAVEL CANYON

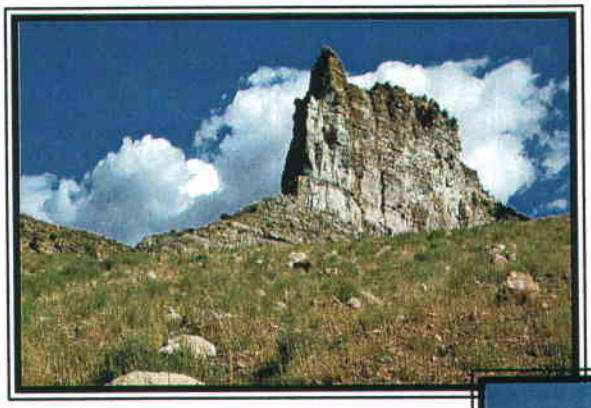


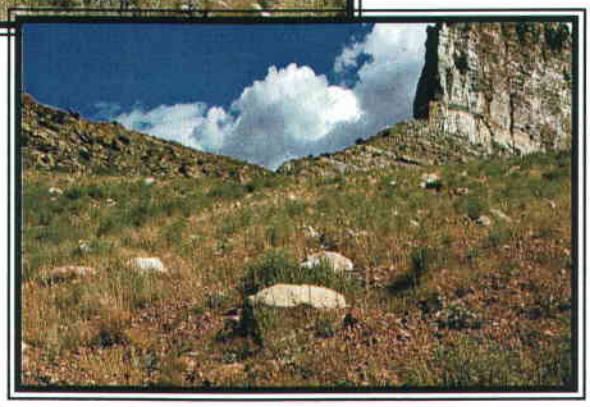


WILLOW CREEK RECLAIMED CONVEYOR CORRIDOR

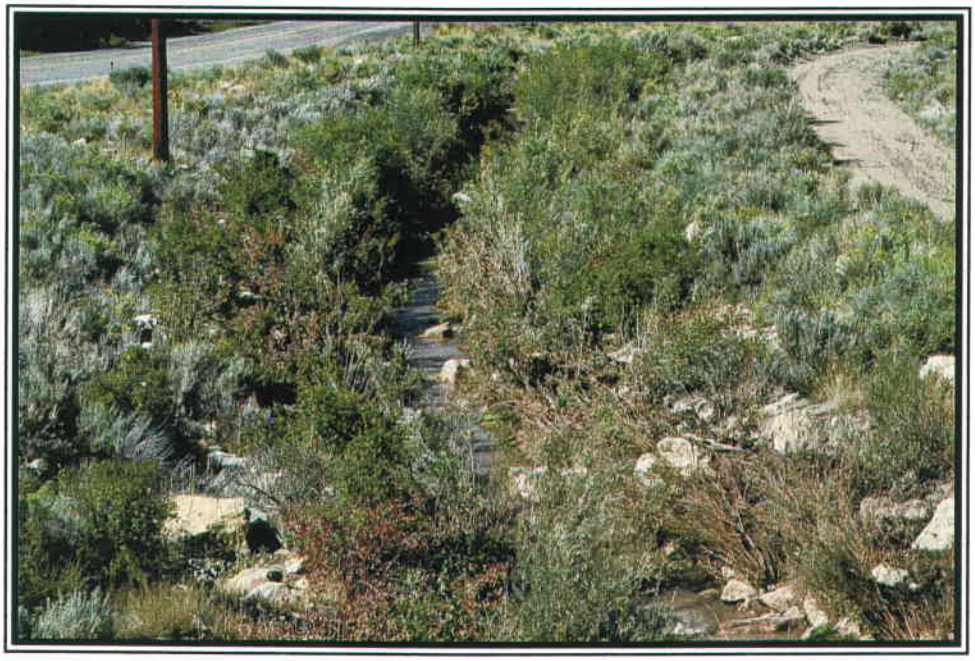


WILLOW CREEK RECLAIMED REFUSE PILE

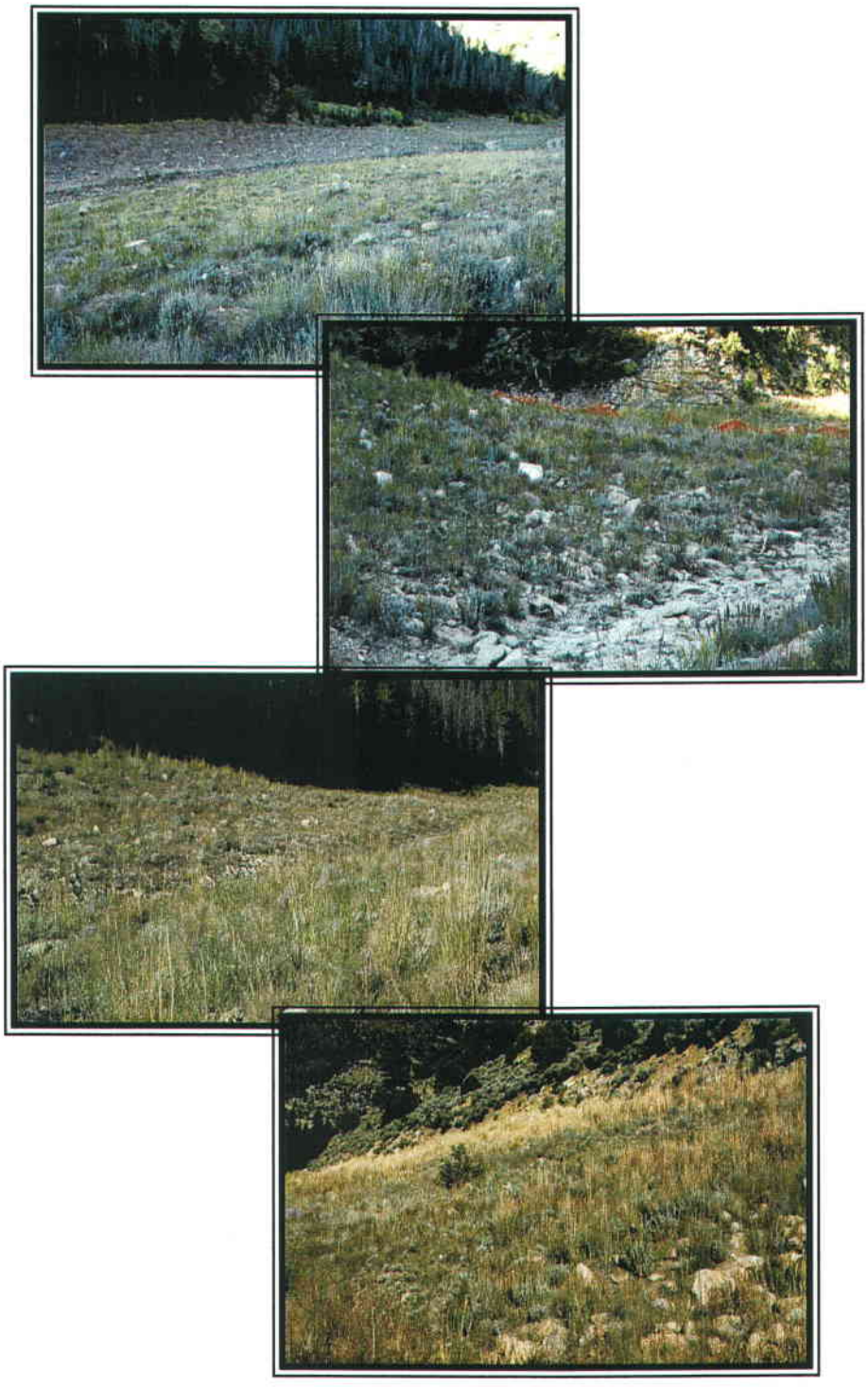


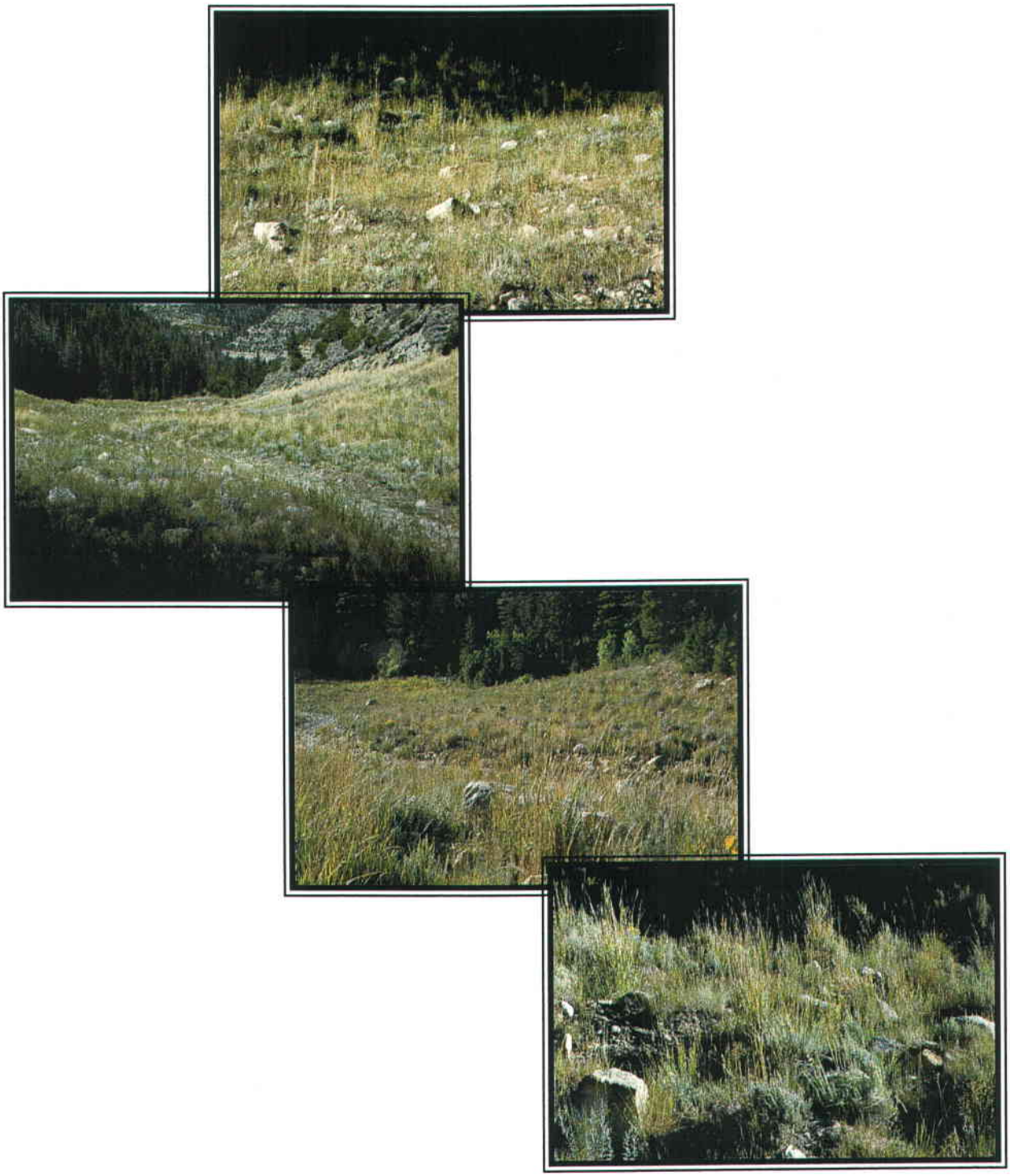


WILLOW CREEK RECLAIMED RIPARIAN BOTTOMS



CRANDALL CANYON RECLAIMED SAGEBRUSH AREAS





CRANDALL CANYON RECLAIMED MTN. BRUSH AREAS

CRANDALL CANYON (SB) REFERENCE AREA

MOUNTAIN BRUSH (MB) REFERENCE AREA

APPENDIX C

Legal Financial, Compliance and Related Information

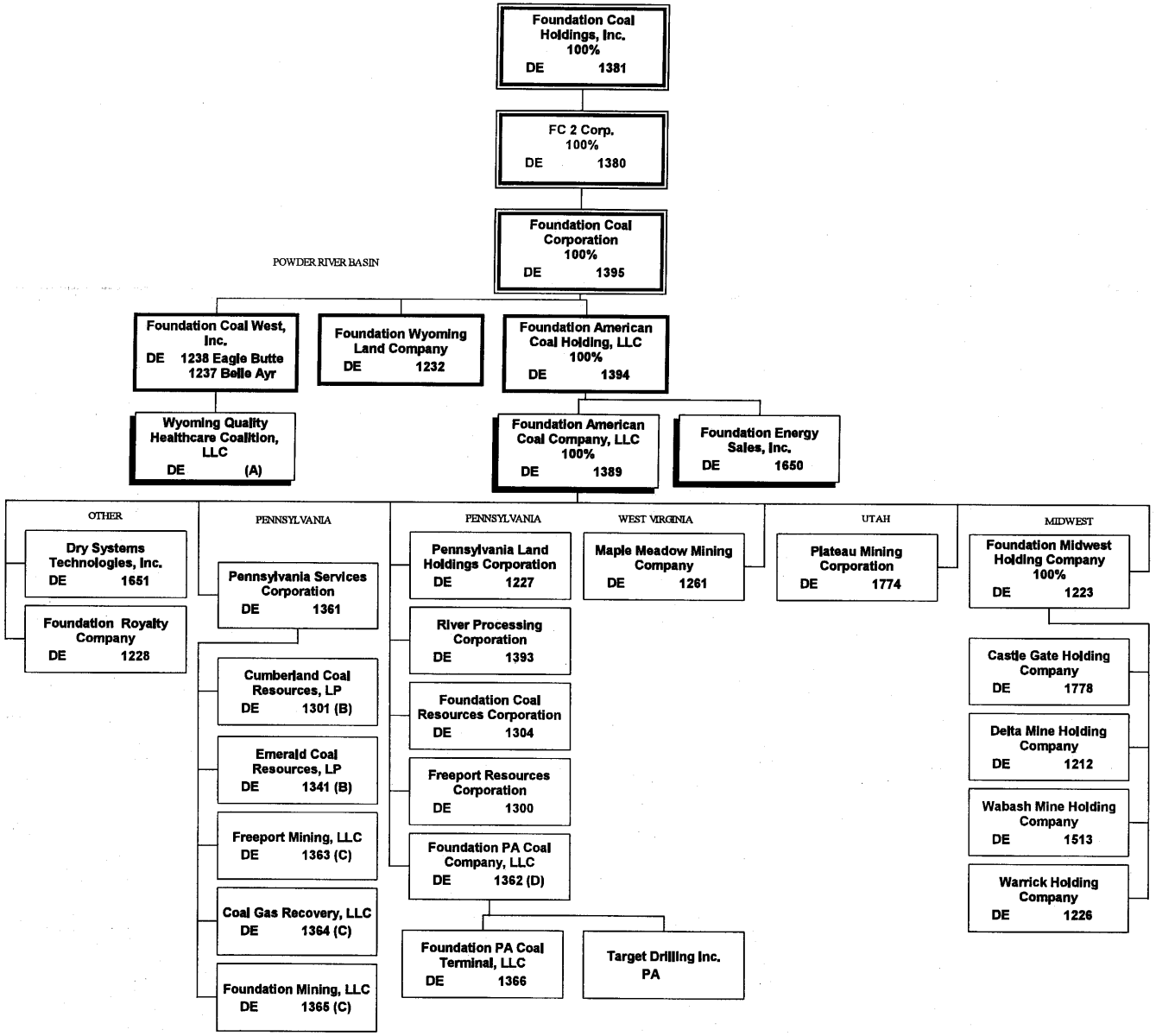
Annual Report of Officers
As submitted to the Utah Department of Commerce

Other change in ownership and control information
As required under R645-301-110

CONTENTS

January 23, 2009

FOUNDATION COAL HOLDINGS, INC. - Summary of Organization
Non-West Virginia Operations



(A) 33.3% owned by Foundation Coal West, Inc.
(B) 1% owned by Pennsylvania Services Corporation, General Partner
(C) 1% owned by Pennsylvania Services Corporation
(D) 99% limited partner of the Pennsylvania LPs designated by (B) above; 99% owner of the Pennsylvania LLCs designated by (C) above; 49% owner of Target Drilling Inc.

Foundation Coal Holdings, Inc.
Delaware

Entity Description

Company Name	Foundation Coal Holdings, Inc.
Domestic Jurisdiction	Delaware
Formation Date	07-19-2004
Federal Tax ID	42-1638663
Registered Agent	The Corporation Trust Company
Acronym	1381
Duration Type	Perpetual
Business Purpose	Holding company of all U.S. coal properties previously owned by RAG Coal International AG.
Comments	--

Entity Addresses

Address Type	Principal Place of Business
Address	999 Corporate Boulevard, Suite 300,Linthicum Heights, Maryland 21090, United States

Authority to do Business

Jurisdiction	Maryland

Former Names

Former Name	FC 1 Corp.
Start Date	07-19-2004
End Date	08-10-2004

Management Structure

Name	Title	Role Start Date
Roberts, James F	Chief Executive Officer	08-17-2004
Kost, Kurt D	President	01-01-2008
Wood, Frank J	Chief Financial Officer	08-17-2004
Kost, Kurt D	Chief Operating Officer	01-01-2008
Olsen, James A	Chief Information Officer	12-13-2007
Olsen, James A	Senior Vice President	12-13-2007

Walker, Greg A	Senior Vice President	08-17-2004
Wood, Frank J	Senior Vice President	08-17-2004
Bryja, James J	Senior Vice President, Operations	06-18-2007
Peelish, Michael R	Senior Vice President, Safety and Human Resources	08-17-2004
Pack, Jr., A. Scott	Senior Vice President, Sales and Marketing	05-18-2006
Anderson, Jr., James L.	Vice President	09-13-2007
Allen, Todd C.	Vice President, Investor and Media Relations	09-17-2007
Walker, Greg A	General Counsel	08-17-2004
Walker, Greg A	Secretary	08-17-2004
Anderson, Jr., James L.	Corporate Controller	12-15-2004
Pearson, Gary G.	Treasurer	08-17-2004
Katz, Edythe C.	Assistant Secretary	10-07-2004
Crowley, Jr., William J.	Director	12-01-2004
Foley, David I.	Director	08-17-2004
Giftos, P. Michael	Director	12-07-2005
Kost, Kurt D	Director	02-26-2009
Krueger, Alex T.	Director	08-17-2004
Richards, Joel III	Director	03-08-2005
Roberts, James F	Director	08-17-2004
Scharp, Robert C.	Director	12-07-2005
Shockley, Thomas V. III	Director	04-01-2006
Roberts, James F	Chairman of the Board	04-01-2006
Richards, Joel III	Lead Independent Director	04-01-2006
Crowley, Jr., William J.	Audit Committee Chairman	12-01-2004
Crowley, Jr., William J.	Audit Committee Member	12-01-2004
Giftos, P. Michael	Audit Committee Member	12-07-2005
Scharp, Robert C	Audit Committee Member	12-07-2005

Shockley, Thomas V. III	Audit Committee Member	04-01-2006
Foley, David I.	Compensation Committee Chairman	02-07-2006
Foley, David I.	Compensation Committee Member	10-26-2005
Krueger, Alex T.	Compensation Committee Member	01-01-2008
Richards, Joel III	Compensation Committee Member	03-08-2005
Shockley, Thomas V. III	Compensation Committee Member	04-15-2007
Richards, Joel III	Nominating and Corporate Governance Committee Chairman	12-07-2005
Crowley, Jr., William J.	Nominating and Corporate Governance Committee Member	12-01-2004
Giftos, P. Michael	Nominating and Corporate Governance Committee Member	12-07-2005
Richards, Joel III	Nominating and Corporate Governance Committee Member	03-08-2005
Scharp, Robert C.	Nominating and Corporate Governance Committee Member	04-01-2006

Capital Structure - NonDerivative

Security Name	Common Stock
# Shares Authorized	100,000,000.0000
# Shares Issued	47,165,788.0000
# Treasury Shares	2,478,011.0000

# Outstanding	44,687,777.0000
Par Currency - Amount	US Dollar
	0.0100
Comments	Shares listed are as of 03/31/2009.

Governance Info. Meeting Rules

There are no entries in this list

Owners

Publicly Traded

End of Corporate Summary Report for Foundation Coal Holdings, Inc.

FC 2 Corp.
Delaware

Entity Description

Company Name	FC 2 Corp.
Domestic Jurisdiction	Delaware
Formation Date	07-19-2004
Federal Tax ID	42-1638665
Registered Agent	The Corporation Trust Company
Acronym	1380
Duration Type	Perpetual
Business Purpose	Acquisition vehicle in connection with acquisition fo North American operations of RAG Coal International AG and related financing. Intermediate holding company.
Comments	--

Entity Addresses

Address Type	Principal Place of Business
Address	999 Corporate Boulevard, Suite 300,Linthicum Heights, Maryland 21090, United States

Authority to do Business

Jurisdiction	Maryland

Former Names

There are no entries in this list

Management Structure

Name	Title	Role Start Date
Roberts, James F	Chief Executive Officer	07-30-2004
Roberts, James F	President	07-30-2004
Wood, Frank J	Chief Financial Officer	07-30-2004
Walker, Greg A	Senior Vice President	07-30-2004
Wood, Frank J	Senior Vice President	07-30-2004
Walker, Greg A	General Counsel	07-30-2004
Walker, Greg A	Secretary	07-30-2004
Anderson, Jr., James	Corporate	11-23-2004

L.	Controller	
Katz, Edythe C.	Assistant Secretary	09-23-2004
Roberts, James F	Director	07-30-2004
Wood, Frank J	Director	07-30-2004

Capital Structure - NonDerivative

Security Name	Common Stock
# Shares Authorized	100.0000
# Shares Issued	100.0000
# Treasury Shares	0.0000
# Outstanding	100.0000
Par Currency - Amount	US Dollar 0.0100
Comments	--

Governance Info. Meeting Rules

Meeting Type	Annual Shareholder's Meeting
Meeting Month	July
Comments	In July at such date, time, and place as determined by the Board.

Owners

Name	**Current Holdings**
Foundation Coal Holdings, Inc.	100.0000

End of Corporate Summary Report for FC 2 Corp.

Foundation Coal Corporation
Delaware

Entity Description

Company Name	Foundation Coal Corporation
Domestic Jurisdiction	Delaware
Formation Date	04-23-2004
Federal Tax ID	26-0085077
Registered Agent	The Corporation Trust Company
Acronym	1395
Duration Type	Perpetual
Business Purpose	Intermediate holding company employing the corporate staff providing shared services to affiliated entities.
Comments	--

Entity Addresses

Address Type	Principal Place of Business
Address	999 Corporate Boulevard, Suite 300,Linthicum Heights, Maryland 21090, United States

Authority to do Business

Jurisdiction	Colorado
Jurisdiction	Maryland

Former Names

Former Name	American Coal Acquisition Corp.
Start Date	04-30-2004
End Date	06-24-2004
Former Name	American Coal Holding Corp.
Start Date	04-23-2004
End Date	04-30-2004

Management Structure

Name	Title	Role Start Date
Roberts, James F	Chief Executive Officer	07-30-2004
Kost, Kurt D	President	01-01-2008
Wood, Frank J	Chief Financial	07-30-2004

	Officer	
Kost, Kurt D	Chief Operating Officer	01-01-2008
Olsen, James A	Chief Information Officer	12-01-2007
Walker, Greg A	Senior Vice President	07-30-2004
Wood, Frank J	Senior Vice President	07-30-2004
Olsen, James A	Senior Vice President, Center of Excellence	10-01-2007
Bryja, James J	Senior Vice President, Operations	06-18-2007
Peelish, Michael R	Senior Vice President, Safety and Human Resources	07-30-2004
Pack, Jr., A. Scott	Senior Vice President, Sales and Marketing	05-18-2006
Anderson, Jr., James L.	Vice President	07-20-2007
Ciuchta, Michael A.	Vice President, Benefits	11-16-2006
Miller, Brian L.	Vice President, Business Development	01-01-2007
Buchan, Gary M.	Vice President, Business Process Support	10-01-2007
Greene, Johnnie W.	Vice President, Environmental Affairs	11-16-2006
Thoenelt, Henrick	Vice President, Financial Analysis and Planning	11-12-2008
D'Amico, Joseph S.	Vice President, Gas Technology and Marketing	08-01-2008
Benedick, Kendall L.	Vice President, General Equipment Management	11-16-2006
Wood, Jonathan B.	Vice President, Government and Community Affairs	01-03-2006
McClure, William H.	Vice President,	11-16-2006

	Human Resources	
Groom, William F.	Vice President, Information Technology	01-03-2006
Cario, Samuel L.	Vice President, Land and Gas Assets	12-01-2007
Richmond, L. Brice	Vice President, Materials Management	11-16-2006
Borla, W. John	Vice President, Operations	03-25-2008
Mishra, R. Michael	Vice President, Planning and Engineering	12-01-2007
Edwards, Richard A.	Vice President, Process Management	11-16-2006
Gallick, John M.	Vice President, Safety and Health	11-16-2006
Walker, Greg A	General Counsel	07-30-2004
Walker, Greg A	Secretary	07-30-2004
Anderson, Jr., James L.	Corporate Controller	11-23-2004
Pearson, Gary G.	Treasurer	07-27-2004
Katz, Edythe C.	Assistant Secretary	09-23-2004
Anderson, Jr., James L.	Director	11-30-2004
Roberts, James F	Director	07-30-2004
Wood, Frank J	Director	07-30-2004
Wood, Frank J	Audit Committee Chairman	12-01-2004
Anderson, Jr., James L.	Audit Committee Member	12-01-2004
Wood, Frank J	Audit Committee Member	12-01-2004

Capital Structure - NonDerivative

Security Name	Common Stock
# Shares Authorized	100.0000
# Shares Issued	100.0000
# Treasury Shares	0.0000
# Outstanding	100.0000
Par Currency - Amount	US Dollar 0.0100
Comments	--

Governance Info. Meeting Rules

Meeting Type	Annual Shareholder's Meeting
Meeting Month	April
Comments	In April at a day, time, and place to be designated by the Board in the notice of meeting.

Owners

Name	Current Holdings
FC 2 Corp.	100.0000

End of Corporate Summary Report for Foundation Coal Corporation

Foundation American Coal Holding, LLC
Delaware

Entity Description

Company Name	Foundation American Coal Holding, LLC
Domestic Jurisdiction	Delaware
Formation Date	10-31-1974
Federal Tax ID	13-2793319
Registered Agent	The Corporation Trust Company
Acronym	1394
Duration Type	Perpetual
Business Purpose	Intermediate holding company for all U.S. affiliates.
Comments	Formerly Ruhrkohle-Stinnes Corporation; name change to Ruhr-American Coal Corporation 10/1/75; name change to RAG American Coal Corporation 12/22/98; name change to RAG American Coal Holding, Inc. 6/18/99; stock sale to Foundation Coal Corporation 7/30/04; name change to Foundation American Coal Holding, Inc. 8/9/04; converted to Foundation American Coal Holding, LLC 8/19/05.

Entity Addresses

Address Type	Principal Place of Business
Address	999 Corporate Boulevard, Suite 300,Linthicum Heights, Maryland 21090, United States

Authority to do Business

Jurisdiction	Colorado
Jurisdiction	Maryland

Former Names

There are no entries in this list

Management Structure

Name	Title	Role Start Date
Roberts, James F	Chief Executive Officer	03-01-1999
Roberts, James F	President	03-01-1999
Wood, Frank J	Chief Financial Officer	03-02-2004
Wood, Frank J	Senior Vice President	03-02-2004
Walker, Greg A	Secretary	08-24-1999

Anderson, Jr., James L.	Controller	05-01-2005
Pearson, Gary G.	Treasurer	03-27-2001
Roberts, James F	Director	03-01-1999
Wood, Frank J	Director	07-30-2004

Capital Structure - NonDerivative

Security Name	Percentage Ownership Interest
# Shares Authorized	--
# Shares Issued	--
# Treasury Shares	--
# Outstanding	--
Par Currency - Amount	--
Comments	--

Governance Info. Meeting Rules

Meeting Type	Annual Member's Meeting
Meeting Month	August
Comments	In August or at such time as designated by the Member.

Owners

Name	**Current Holdings**
Foundation Coal Corporation	100.0000

End of Corporate Summary Report for Foundation American Coal Holding, LLC

Foundation American Coal Company, LLC
Delaware

Entity Description

Company Name	Foundation American Coal Company, LLC
Domestic Jurisdiction	Delaware
Formation Date	06-18-1999
Federal Tax ID	54-1947356
Registered Agent	The Corporation Trust Company
Acronym	1389
Duration Type	Perpetual
Business Purpose	Holding Company
Comments	Converted from the corporation RAG American Coal Company on 3/10/04.

Entity Addresses

Address Type	Principal Place of Business
Address	999 Corporate Boulevard, Suite 300,Linthicum Heights, Maryland 21090, United States

Authority to do Business

There are no entries in this list

Former Names

Former Name	RAG American Coal Company LLC
Start Date	03-10-2004
End Date	07-30-2004

Management Structure

Name	Title	Role Start Date
Roberts, James F	Chief Executive Officer	06-24-1999
Roberts, James F	President	06-24-1999
Wood, Frank J	Vice President	06-30-1999
Walker, Greg A	Secretary	06-30-1999
Anderson, Jr., James L.	Controller	05-01-2005
Pearson, Gary G.	Treasurer	03-27-2001
Roberts, James F	Director	06-18-1999
Wood, Frank J	Director	07-30-2004

Capital Structure - NonDerivative

Security Name	Percentage Ownership Interest
# Shares Authorized	--
# Shares Issued	--
# Treasury Shares	--
# Outstanding	--
Par Currency - Amount	--
Comments	--

Governance Info. Meeting Rules

Meeting Type	Annual Member's Meeting
Meeting Month	March
Comments	In March or at such other time as designated by the Member.

Owners

Name	**Current Holdings**
Foundation American Coal Holding, LLC	100.0000

End of Corporate Summary Report for Foundation American Coal Company, LLC

Plateau Mining Corporation
Delaware

Entity Description

Company Name	Plateau Mining Corporation
Domestic Jurisdiction	Delaware
Formation Date	08-26-1982
Federal Tax ID	95-3761213
Registered Agent	The Corporation Trust Company
Acronym	1774
Duration Type	Perpetual
Business Purpose	Holds permits and has certain payment obligations associated with the reclaimed Star Point and Willow Creek underground coal mines in Utah.
Comments	Holds SMCRA permits. Minority interest held by Mitsubishi bought out 12/10/01.

Entity Addresses

Address Type	Principal Place of Business
Address	P. O. Box 30,Helper, Utah 84526, United States

Authority to do Business

Jurisdiction	Utah

Former Names

Former Name	Cyprus Plateau Mining Corporation
Start Date	06-08-1987
End Date	06-30-1999

Former Name	Plateau Mining Company
Start Date	08-26-1982
End Date	06-08-1987

Management Structure

Name	Title	Role Start Date
Bryja, James J	President	12-01-2007
Wood, Frank J	Vice President	12-20-1993
Deal, Larry M.	Vice President, Sales and Marketing	05-01-2005
Walker, Greg A	Secretary	06-30-1999

Anderson, Jr., James L.	Controller	05-01-2005
Pearson, Gary G.	Treasurer	12-13-2002
Roberts, James F	Director	06-30-1999
Wood, Frank J	Director	06-30-1999

Capital Structure - NonDerivative

Security Name	Common Stock
# Shares Authorized	10,000.0000
# Shares Issued	200.0000
# Treasury Shares	0.0000
# Outstanding	200.0000
Par Currency - Amount	US Dollar 100.0000
Comments	Minority interest held by Mitsubishi bought out 12/10/01.

Security Name	Preferred
# Shares Authorized	100.0000
# Shares Issued	0.0000
# Treasury Shares	0.0000
# Outstanding	0.0000
Par Currency - Amount	US Dollar 100.0000
Comments	10 shares designated as Series A.

Security Name	Series A Preferred
# Shares Authorized	10.0000
# Shares Issued	1.0000
# Treasury Shares	0.0000
# Outstanding	1.0000
Par Currency - Amount	US Dollar 100.0000
Comments	--

Governance Info. Meeting Rules

Meeting Type	Annual Shareholder's Meeting
Meeting Month	December
Comments	Second Thursday at 8:00 a.m. at the principal office unless otherwise designated by the Board.

Owners

Name	**Current Holdings**
Foundation American Coal Company, LLC	200.0000
Foundation American Coal Company, LLC	1.0000

APPENDIX D

Mine Maps

As required under R645-302-525-270

CONTENTS

NONE

APPENDIX E

Other Information

In accordance with the requirements of R645-301 and R645-302

CONTENTS

WILLOW CREEK MINE

Permit Number C/007/0038
Overview of Reclamation, Permitting and Phased bond Release Activities
2008 Annual Report

The Willow Creek Mine is located approximately 4 miles north of Helper, Utah where the Price River and Willow Creek have cut canyons through the western Book Cliffs Coal Field. A performance bond in the amount of $2,175,114 is held to ensure that all reclamation responsibilities are accomplished. The Permit expires on April 24, 2011.

Mining has occurred in this area since the late 1800's. Following initial settlement of the area, development occurred fairly rapidly with the discovery of extensive coal reserves in late 1870's and construction of the railroad in the late 1870's and early 1880's. Active underground mining operations continued from the 1870's through 1940's when coal demand and production began to decline, due to reduced postwar demand of industrial production and the shift to diesel railroad engines. The Castle Gate Mine No.1, 2 and 4, which are encompassed by the Willow Creek Mine permit boundary, were developed and operated from 1888 through 1972, when the last of the mines closed.

The Willow Creek Mine received its mining and reclamation permit in 1996. Mining continued until July 31, 2000. The mine went into permanent cessation with demolition activities commencing in the spring 2002 with removal of the overland conveyor and storage facilities on the mine site proper. In the fall of 2002, the fan intake shaft was completely backfilled with incombustible material, and the five portals were sealed.

In 2003, reclamation related activities included: the demolition, shaft backfilling, reshaping, drainage construction, and reseeding of the Crandall Canyon facilities; the demolition of the overland conveyor, stacking tubes, crushing facility, preparation plant, and other facilities associated with the preparation and loading of the coal and disposal of coal processing waste. Also in 2003, approximately 20,000 feet of power line and poles commencing in Sowbelly Gulch and traversing to Hardscrabble Canyon and ending in Crandall Canyon were removed.

In 2004, reclamation related activities included: the reshaping, drainage construction and reseeding of the Schoolhouse Canyon refuse pile, the preparation plant and coal storage areas, the overland conveyor corridor including the long and short tunnels, the Willow Creek topsoil stockpile area, the temporary trailer/office area, Gravel Canyon and the mine facilities area including the highwall at and above the five mine portals. Also in 2004, the area around the western most shafts in Crandall Canyon was reshaped and reseeded due to settling that had taken place since the shaft was backfilled in 2003. Also in 2004, seedlings were planted on the Crandall Canyon reclaimed area.

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In 2005 the demolition of the train loadout facility was completed leaving the earthwork and seeding of this small area as the only remaining reclamation project to be accomplished under the SMCRA permit. Also in 2005 the area around the western most shaft in Crandall Canyon was reshaped and reseeded due to settling that had taken place since the shaft was reshaped in 2004.

In April of 2005 the Permittee submitted a request for phase I bond release on 5.75 acres in Gravel Canyon. On September 8, 2005 DOGM conducted their on-site bond release inspection and on September 27, 2005 issued a report stating that the site met the minimum requirements for phase I bond release.

In September 2005, the Permittee submitted a request for Phase I bond release on 49.1 acres of land related to the Schoolhouse Canyon Refuse Pile and for Phase III bond release on 46.2 acres of land related to the Preparation Plant Area which had been sold to the Price River Water Improvement District. On May 11, 2006, the DOGM performed the phased bond release site inspection and on October 27, 2006 issued a report stating that the site met the requirements for the requested Phase I and Phase III bond release.

In April of 2006 the earthwork reshaping and reseeding of the train loadout facility area was completed. The demolition of this site was done in 2005. Also, in December of 2006, the area around the western most shaft in Crandall Canyon was reshaped and reseeded due to settling (approximately three feet) that had taken place since the shaft was last reshaped in 2005.

In May of 2006, the Permittee submitted a request for Phase I bond release on 20.8 acres of land related to the Overland Conveyor Corridor and for Phase III bond release on 36.4 acres of land related to the Mine Buildings and Facilities. On June 8, 2006 the DOGM performed the phased bond release site inspection of the substation area and on July 28, 2006 issued a report stating that the site met the requirements for the requested Phase I and Phase III bond release.

On November 27, 2006 it was discovered that the return air shaft (also known as shaft #2 or the eastern shaft) in Crandall Canyon, which was backfilled in 2003, had settled significantly and an unknown quantity of water was entering the shaft from a horizon estimated to be within the top 100 feet of the shaft opening. The Permittee though a contractor, attempted to refill the shaft with the surrounding material but the water standing in the shaft came to the surface and discharged into Crandall Canyon and eventually into the Price River. In December, a heavy gauge wire mesh was placed over the open shaft and a 6 foot chain link fence was build around the shaft for safety purposes. It was determined that the best course of action would be to wait until spring of 2007 to further address this situation.

In 2007 the UPDES permit was modified to allow for an outfall in Crandall Canyon (outfall # 016) to discharge clean water from the Crandall Canyon #2 shaft. The Division authorized emergency approval to excavate a temporary holding and evaporation pond to

hold the dirty water from the shaft. This pond was constructed aprox. 100 feet to the West of the #2 shaft and the dirty water was placed into this pond for settlement and evaporation. On July 20th all of the dirty water from the shaft had been placed in the pond and the shaft was backfilled. It was determined that when the pond dried up final reclamation of the pond and shaft area would be accomplished.

In April of 2008 the UPDES permit was renewed. In July of 2008 the pond constructed near the #2 shaft in Crandall Canyon, which held the water placed in it in July of 2007, had completely evaporated and the final reclamation of this pond was completed and the reclaimed area was reseeded. In August of 2008 the Division approved the removal of the Barn Canyon shaft from the permit and reduced the bond by $100,000; the Barn Canyon Shaft was never constructed and the land was never disturbed. In august of 2008 the two remaining outfalls in the UPDES permit were inactivated. These two outfalls are, 001 which is the pond which is now part of the College of Eastern Utah's Western Energy Training Center which will likely never discharge and 016 which was the temporary Crandall Canyon #2 shaft and Pond which had been backfilled and reclaimed in July of 2008. Inspections of pond 001 continue to be done quarterly. Also in 2008 the year-four revegetation studies were completed for Crandall Canyon, Gravel Canyon, the Schoolhouse Canyon Refuse Pile and the Conveyor Corridor.